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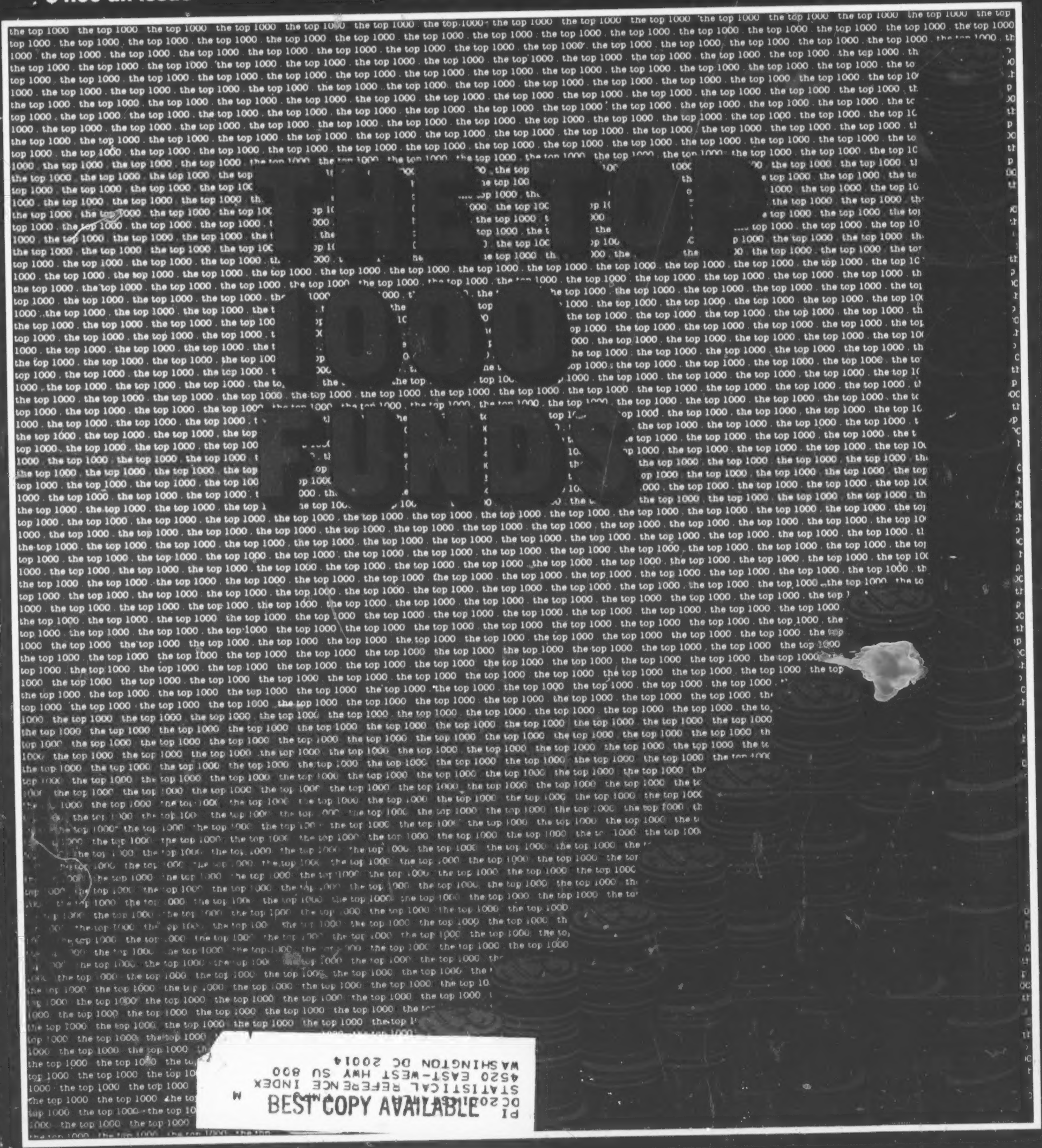
THE TOP 1000 FUNDS



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Consultants fire on PBGC investments

By Joel Chernoff

WASHINGTON — The way the Pension Benefit Guaranty Corp.'s $1.1 billion in assets are invested ultimately might lower the return on investments and drive up premiums paid by employers to the agency, two members of the PBGC's now-defunct Investment Policy Panel claim.

The panel of six investment professionals was terminated by the PBGC Advisory Committee in October.

The advisory committee, which created the group eight years ago for advice on investment matters, makes recommendations to the agency on a variety of issues, including investments.

In a written statement submitted to Pensions & Investment Age, former investment panel members Edmund A. Mennis and Roger F. Murray argue the PBGC is a unique corporation, and is not like a life insurance company that constantly must match its assets against its liabilities and invest heavily in fixed-income vehicles.

In the past, Mr. Murray served as vice president at Bankers Trust and an executive at the College Retirement Equity Fund, and is professor emeritus at Columbia University's Graduate School of Business. Mr. Mennis previously headed the investment operations at Repubic-Bank Dallas and Security Pacific Corp.

"Managing assets as if PBGC is a legal reserve life insurance company, which it is not, can needlessly sacrifice potential investment return, ultimately causing increased per capita assessments on the private pension system and adding further incentives for corporations to discontinue defined benefit plans," said the authors, both independent consultants.

Their document largely was prompted by the termination of their investment panel and by a PBGC decision to move $100 million from an equity manager — Forstmann-Leff Associates of New York — to a fixed-income manager — Pacific Investment Management Co. of Newport Beach, Calif. — last June. The money was invested in Ginnie Maes.

That $100 million represents almost 25% of the agency's discretionary assets.

The statement comes at a time when the PBGC plans to seek an increase in the annual premium paid by employers to $6 per participant from $2.60, with an additional

Continued on page 92

Pensions &
Investment Age

Pooled fund draws plans

By Kimberly Blanton

CHICAGO — More than 20 institutional investors, mostly pension funds, provided almost half of the $340 million committed to Warburg, Pincus Capital Partners, a venture capital fund.

The General Electric Co. and American Telephone & Telegraph Co. pension plans have two of the largest partnership interests. Each committed $18.75 million.

One of the biggest pooled funds of this type, Warburg, Pincus Capital Partners is not confined to financing companies in the early stages of development. It obtains interests in companies through numerous financing methods, including leveraged buy-outs and the purchase of stock in private and publicly traded corporations.

Several corporate pension funds said they bought an interest in Warburg, Pincus Capital Partners because they were pleased with the returns of the fund the company set up in 1980.

None of them would provide specific returns to that first fund, however. Warburg Pincus failed to return repeated calls.

In addition to General Elec-

Continued on page 89

Late news

N.Y. funds hire 5

NEW YORK — The New York City Employees Retirement Fund and the New York City Police Department Pension Fund have hired five managers to invest a total of $500 million in equities.

The $8 billion city employees fund will allocate $65 million each to Batterymarch Financial Management, Provident Capital Management, Lazard Freres Asset Management and Stein Roe & Farnham, and $40 million to Dimensional Fund Advisors.

The $3 billion police fund will allocate $50 million each to Batterymarch, Provident Capital and Lazard Freres, and $25 million each to DFA and Stein Roe. Eberstadt Asset Management and Scudder, Stevens & Clark were dropped.

Continued on page 3

Funds grew 30% during 1983

Assets surge to $806 billion

NEW YORK — The nation's 1,000 largest pension funds experienced extraordinary growth during 1983, as asset values surged by almost 30% to $806 billion.

Many funds grew by more than 30%, however, including the nation's largest — that of American Telephone & Telegraph Co. The assets of AT&T's employee benefit plans, which were being split into eight separate plans beginning Jan. 1, 1984, jumped 34% to $61.2 billion as of Sept. 30, 1983.

International Business Machines' pension assets rose even more dramatically, up almost 45% to $10.1 billion. Hughes Aircraft's assets increased 44.4%; Standard Oil of California's assets grew 43.9%; Caterpillar Tractor's assets jumped 36.1%; RCA's assets increased by 35%; and Ford Motor Co.'s assets grew by 34.6%.

Some public employee pension funds also climbed dramatically in the 12 months ended Sept. 30. The assets of the California Teachers Retirement System, for example, grew by 43.9% to $20.5 billion.

The assets of the New Jersey pension funds increased by 46.8% to $9 billion; the Pennsylvania School Employees fund rose 40.6% to $5.9 billion; and the assets of the Washington State Investment Board increased 40.5% to $5.1 billion.

This extraordinary growth was fueled largely by the strong stock market from September 1982 through September 1983, as contributions by pension fund sponsors declined $3.4 billion from the 1982 figure of $37.1 billion.

Unlike 1982, when the public employee funds showed the greatest growth, corporate funds grew most rapidly in 1983, reflecting their higher commitment to common stocks.

Corporate funds

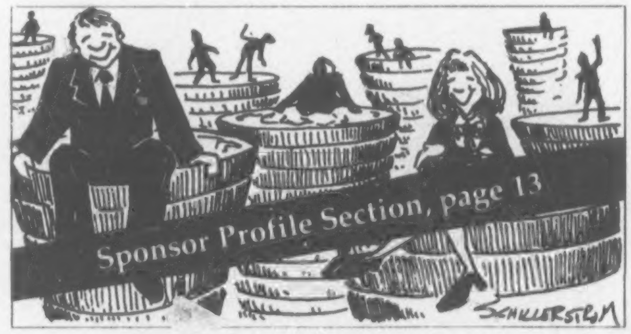
For the first time since the Pensions & Investment Age survey began, the 25 largest corporate funds have more assets than the 25 largest public funds. However, since this in large part reflects the growth of the AT&T pension assets, and the AT&T funds are being broken up, this might be a one-year phenomenon.

The assets of the 25 largest corporate funds rose 30.6% to $196.7 billion in the year ended Sept. 30, compared with 15.3% growth in 1982, when bonds outperformed stocks.

The assets of the 25 largest public funds, on the other hand, grew a respectable 25% in the year ended Sept. 30, to $195.8 billion. A year earlier, they had registered a 22% gain, thanks to their heavier commitment to bonds. The assets of the 10 largest union funds grew by 25.8% in 1983, compared with 21.8% in 1982.

The slower growth of the public and union funds reflected their heavier commitments to bonds and lower commitments to common stocks than in the corporate funds.

The average asset mix for the corporate funds was 55.1% common stocks, 27.2% bonds, 8.4% cash equivalents, 4.3% equity real estate, 0.8% mortgages, 1.8% guaranteed investment contracts and 2.4% in other investments.



Union funds were invested 26.2% in common stocks, 37.2% in bonds, 13.8% in cash equivalents, 5.1% equity real estate, 8.7% mortgages, 7.1% GICs and 1.9% other investments.

Public funds

Public funds, on the other hand, were only 28.7% invested in common stocks, 51.5% in bonds, 9.46% in cash, 1.34% in real estate equity, 8.86% in mortgages and 0.14% in other investments .

These facts were obtained from P&I Age's annual survey of the 200 largest employee benefit plans and listing of the next 800 plans.

The 1983 survey reports the total assets, pension assets, profit-sharing and thrift plan assets as well as contributions and benefit payments of the 200 largest funds.

The profiles also include, in most cases, their asset mix, their use of alternative investments (such as international investment, venture capital and real estate) and list their money managers. The survey showed:

- 1983 was a relatively slow year for investment in real estate by pension funds, as the assets so invested increased only 17.3%.
- The number of funds managing assets in-house increased to 125 from 119, and the assets managed internally increased by 33%.
- The number of bond portfolios dedicated in 1983 decreased. In

Continued on page 14

California fund adds for realty: LaSalle Advisors, Equitable Life

By Mark Westerbeck

SACRAMENTO, Calif. — The California Public Employees Retirement System has picked The Equitable Life Assurance Society of the United States and LaSalle Advisors Inc. as real estate advisers for the $20.5 billion fund.

F.I.A. Associates already manages real estate assets for the California fund, which is the third largest pension fund in the United States, according to *Pensions & Investment Age's* survey of the largest 1,000 funds.

The bonanza for the two newly picked advisers and F.I.A. eventually might be as much as $1 billion, according to one finalist in the selection. The fund already has almost $1 billion invested in real estate, and this additional money would bring the real estate allocation for the California fund to about 10% of its assets.

Through F.I.A., which scored a tremendous coup when it made the California public employees its first client in mid-1981, the fund already has placed $900 million, or 4.4% of total assets, in a variety of equity and mortgage investments. They include an 81% interest in United States Steel's headquarters in Pittsburgh, worth $210 million in September 1982.

W. James Smith, mortgage investment officer for the retirement system, said the fund's allocation to real estate will be decided by June.

First, studies must be completed and a new asset mix must be determined, he said. A statutory 10% limit on real estate investment has been lifted, he added.

In its move to multiple managers, the retirement system has devised three "acquisition zones" to reduce the possibility the advisers will knock heads over the same properties.

Equitable, based in New York, takes the East; LaSalle, out of Chicago, gets the Midwest; and F.I.A., in Sacramento, watches the West. "The advisers will be able to cross lines, so to speak, by registering the property with the investment staff here," said Mr. Smith.

Real estate

Stratifying the market in some way apparently will increase as major pension funds strive to get greater control and returns in a maturing market through several direct accounts than what they achieve with commingled funds.

The Florida State Board of Administration had structured managers on a regional basis before policy was changed and commitments were made to commingled funds

Continued on page 89

American Express sub enlistment

Firm recruits Morgan execs

By Ivy Schmerken

NEW YORK — American Express Co. has raided Morgan Guaranty Trust Co.'s international investment department in London and New York, recruiting five executives to form a new global money management subsidiary.

The financial service giant induced Karl R. Van Horn, senior vice president, and three investment colleagues to leave the bank's $5 billion, London-based international investment operation.

The three managers forming the nucleus of the new company are: Bernard Rattray, a global manager whose specialty was the U.S. market, and who was the person directly responsible for separate U.S pension accounts; Mark Tapley, a global manager with special expertise in quantitative techniques; and Chilton "Tony" Thomson, a global manager specializing in European securities, who did marketing and servicing for U.S. pension clients.

Also, Herschel Post, who worked mostly in New York as a member of the senior management committee for the institutional investor group for Morgan, will be chief operating officer of the new firm, American Express Asset Management Holdings.

The new subsidiary will offer global investment management products, including mutual funds "free to roam all security markets" geared to the small, individual investors. On a selective basis, it will manage assets for pension funds by forming a limited number of long-term relationships.

Martin E. Harrison, vice president and senior investment officer, was named head of international investments at Morgan. His appointment was announced by C. Nicholas Potter, senior vice president and chief investment officer of the bank's institutional investment group.

Mr. Harrison already was head of the international investment department's London office and supervised offices in Singapore, Hong Kong and Tokyo. He succeeds Mr. Van Horn in the senior executive position and also retains his other responsibilities.

"It is very much business-as-usual," Mr. Harrison said.

He made it clear that he is the "impresario" in charge of client servicing, managing the professional staff, the administrator of the whole group.

However, it is Walter Zinsser, vice president and senior investment officer, who is chiefly responsible for international investment portfolio management, which he has done since 1976.

The administrative duties handled by Mr. Post were assigned to David Hawes.

Mr. Harrison said he is not expecting major changes on the investment side, except perhaps appointing a replacement for Mr. Rattray's coverage of U.S. common stocks. David Roche, who manages an Australian equity fund, also will be given more portfolios, he added.

Mr. Harrison said the Morgan group is still intact in terms of a "lively investment process."

"I'd tell clients to watch and see how we get on. I think they'll be satisfied by the results," he said.

Rudolph Leuthold, who was Mr. Zinsser's backup on managing the huge commingled international equity funds, was assigned to manage the U.S. pension portfolios, previously handled by Mr. Rattray, according to a pension client.

Meanwhile, American Express also recruited from outside Morgan for its new company, hiring Robert Kugler, for 12 years a portfolio manager of the Japan Fund, a closed-end fund quoted on the New York Stock Exchange, and Seth Strickland, previously vice president of institutional equity sales at Smith Barney, Harris Upham & Co. Inc.

For Mr. Van Horn, named chief executive officer of the new firm, the move was driven by an opportunity to start a "wholesale investment boutique with access to mass distribution channels."

Financial security, profit-sharing and working with a professional group he respects, also motivated the change.

Mr. Van Horn had spent his entire 22-year career with Morgan Guaranty. He previously held investment research assignments in New York and Paris and managed domestic portfolios for 10 years.

Continued on page 93

Layoffs prompt worker lawsuits

By Richard J. Gillespie

NEW YORK — Hundreds of former employees of both Continental Can and Armstrong Rubber Co. contend they were fired in violation of ERISA.

Section 510 of the Employee Retirement Income Security Act prohibits a company from firing employees to avoid paying them benefits.

In a court case against Continental Can, attorneys for the United Steelworkers of America say the company selected about 250 employees for layoffs because they were not eligible for special "shut down" benefits.

In another court case, former employees of Armstrong Rubber seek $200 million in damages on the ground that the tiremaker singled out their plant for closure because its employees had a higher average age, higher salaries and higher benefits than employees at other plants.

An Armstrong official said the suit is without merit, and that lawyers were preparing an appropriate response.

At Continental Group, owner of Continental Can, an official said it is company policy not to comment on pending litigation.

The class action suit in New Haven, Conn., against Armstrong Rubber alleges the company closed its West Haven plant in 1981 because employee benefits were substantially higher there than at any of the company's other plants.

"The cost of the pension and health benefits was substantially greater at the West Haven plant and that was related to the age of the employees, and also to the rate of pay of employees, which was higher than in the other plants," said attorney Charles A. Pillsbury, who filed the suit.

Armstrong sought to "cut the escalating costs of providing pensions and other employee benefits," he said.

Unable to provide full and precise figures to document the additional expense the company would have incurred had it con-

Continued on page 91

Late news

Continued from page 3

Insurance proposal

WASHINGTON — Bucking opposition from the brokerage community, the Federal Deposit Insurance Corp. and the Federal Home Loan Bank Board have proposed limiting insurance coverage on brokered deposits to $100,000.

The proposal met an almost immediate negative response from the Securities Industry Association and brokers of jumbo certificates of deposit, such as Merrill Lynch.

The proposal would limit insurance coverage to $100,000 per insured bank or savings association, or on the total deposits placed by or through a single deposit broker.

The FDIC and bank board also specifically requested comments on whether the prohibition should apply to deposits placed by brokers on behalf of pension funds.

Under current regulations, each member of an employee benefit fund is insured up to $100,000 when the fund purchases a jumbo CD from a bank or savings association.

Also under current regulations, deposit brokers can achieve full insurance for any purchaser of jumbo CDs by bundling various certificates that contain no more than $100,000 in any one institution.

Knoxville restructures

KNOXVILLE, Tenn. — The $93 million Knoxville City Employees' Pension Fund hired Southeastern Asset Management, Memphis, Tenn., for equities and STW, Santa Barbara, Calif., for fixed income.

Southeastern Asset Management and current manager Citicorp Investment Management, Houston, will manage 35% of the assets in equities, about $32.5 million.

STW and current manager Todd Investment Advisors, Louisville, Ky., will receive 65% or $60.4 million to invest in fixed-income securities. A portion of that amount will be invested in a dedicated bond fund to be handled by an unnamed manager. Meidinger Asset Planning Services Inc. consulted on the restructuring.

Sears taps for realty

CHICAGO — Sears Investment Management Co., the wholly owned subsidiary that runs Sears, Roebuck & Co.'s $5.1 billion retirement funds, has hired Aldrich, Eastman & Waltch to manage its first equity real estate investments, according to a source. SIMCO officials refused to comment.

James G. Graaskamp, professor and chairman of the department of real estate and urban land economics at the University of Wisconsin, aided in the search.

Termination approved

DETROIT — Stroh Brewery Co. has received approval from the Pension Benefit Guaranty Corp. to terminate its $180 million pension plan for salaried employees, according to Ralph Caponigro, vice president-finance.

The company will recapture about $95 million in excess assets from the termination, effective Oct. 13, he said. The agency issued its notice of sufficiency Dec. 29.

Fund resells stock

BETHESDA, Md. — Martin Marietta Corp.'s pension fund resold 500,000 shares of convertible, exchangeable, preferred stock at $60.63 per share to Goldman Sachs & Co., which offered it in a secondary public offering Jan. 11 at $62.50 per share. In December 1982, the fund accepted the stock contribution in lieu of cash.

Wilson terminating

OKLAHOMA CITY — Wilson Foods Corp. will file to terminate its overfunded pension plan for salaried employees and plans to use some of the recovered assets to help pay off creditors.

Wilson Foods announced its intention to terminate the plan as of Jan. 31 in its reorganization plan filed under Chapter 11 of the bankruptcy code. However, IBP, an Occidental Petroleum Corp. unit, has announced its intention to buy the company's assets.

If the termination goes through, Wilson Foods expects to record a one-time extraordinary gain of $20 million in its fiscal second quarter from the termination and the sale of a plant. How much will be from the recaptured assets is not known.

Termination granted

LOS ANGELES — Occidental Petroleum Corp. announced it received Internal Revenue Service and Pension Benefit Guaranty Corp. approval for the termination of the Cities Service Retirement Income Plan.

The company said it would receive $375 million in excess assets from the termination of this and three terminated Occidental pension plans.

Marshall to leave Deere for BayBanks

By Kimberly Blanton

MOLINE, Ill. — Greta Marshall, manager of pension assets at Deere & Co., has resigned to become head of BayBanks of Boston's new investment division.

The change, besides moving Ms. Marshall from the buy side of investment management to the sell side, will enable her to fulfill a longtime ambition: to run the 26-mile Boston Marathon.

Ms. Marshall said that 20 years ago, women were barred from competing in that prestigious marathon. So she has made it her 1984 New Year's resolution.

Ms. Marshall, who has been at Deere for almost 10 years, oversees the $1.5 billion fund, most of which is managed in-house. Under Ms. Marshall's direction, BayBanks will be geared to investment management for individuals and small corporate pension plans.

She will bring the roughly $1 billion the bank now manages into

Continued on page 90

Greta Marshall

Highlights

DAN DORFMAN

Putting the bull out to pasture 86

GENERAL NEWS

EBRI counters issue 81
Funds tap into oil and gas — directly 84
Statement 33 test completed 85
Council fighting public plan law 87
Mellon funds target Michigan realty 88

TOP 200 FUND PROFILES

Fund contributions drop for 2nd year 13
Top 200 asset mix 13
Growth in total assets 13
PBGC assets top $1 billion 14
Top 200 asset mix, corporate, public, union 14
Top 1,000 funds listed 16
Alphabetical listing of largest 200 funds 22
Funds with equity real estate 34
25 largest profit-sharing plans 42
Sponsors with internal management 44
Funds investing in venture capital 46
Pension funds with GICs 50
25 largest pension plans 56
Funds with indexed assets 62
Funds with dedicated assets 68

OTHER DEPARTMENTS

Datebook 79
Editorials 10
Letters 10
Money movers 94
News briefs 82
People 78
Washington 80

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Profiles: The top 200

Contributions to top funds drop for 2nd year

By Kimberly Blanton

CHICAGO — Total contributions to the nation's 200 largest corporate and public pension funds declined more than $2 billion in 1983.

This was the second year in a row that contributions declined. However, the decline in 1982 was small.

The employee benefit fund sponsors allocated less to their pension funds despite climbing payments to retired employees.

Benefit and contribution data were gathered in *Pensions & Investment Age's* annual survey of public and corporate funds.

Benefit levels have risen 20.2% since 1981. The benefits the largest 200 funds paid in 1981 were $23.1 billion, compared with $27.75 billion in 1983. Data were not available for 1982.

In contrast, contributions to these funds in 1983 fell 5.6% to $35 billion, from $37.1 billion in 1982. This is only the second time contributions have fallen, indicating a reversal in the longtime trend of ever-increasing contribution levels.

Between 1981 and 1982, contributions also dipped 0.51%. Before that, contributions rose continually. The contribution level in 1981 was 23% more than 1980.

The sharp decline in contributions in the year ending Sept. 30 is exaggerated by American Telephone & Telegraph Co.'s $1.3 billion cut in contributions. AT&T accounted for a large part of the total $2.1 billion decline among the 200 funds.

After subtracting AT&T's contribution from both year's statistics, the decline was slimmer: contributions dipped 2.4% to $32.4 billion from $33.2 billion.

Richard Gray, district manager and AT&T spokesman, said two factors led to the reduced contributions.

Changes in the plan's design made in Oct. 1, 1980, have lowered its estimate of future benefits. Before the change, all employees' retirement benefits were based on their earnings in the last five years before retiring.

In 1980, AT&T began negotiating union retirement benefits at a flat dollar rate per employee per year of service. Salaried employees' benefits also were changed to reflect an average career salary, which is lower than the average salary in the last five years.

The annual actuarial review of the past and anticipated performance of the fund and inflation also brought lower contributions, Mr. Gray said. Numerous companies have raised the interest rate assumed in estimating future liabilities, lowering the liability. Mr. Gray would not disclose whether AT&T had done so.

Like other companies surveyed, AT&T's contributions fell, while benefits went up. AT&T's benefit level rose to $2.1 billion, $470 million above 1982's level.

Mr. Gray said the reduction in Bell System employees boosted benefits because many employees were lured into early retirement with improved benefits. The operating companies were reducing their work force in 1982 and 1983, and AT&T began cuts in 1983.

Many of the largest funds' contributions actually went up: the Michigan State Employees Retirement System's contribution doubled to $1.2 billion in 1983.

But the declines, prevalent among smaller funds, resulted in a net decrease. Although the funds and their rankings in the survey shift from year to year, the largest funds are in the survey every year, so the statistics are comparable.

Aside from AT&T, large corporate pension funds that showed lower contributions between 1982 and 1983 include Exxon Corp., reduced to $271 million from $455 million; Mobil Oil Corp., to $230 million from $300 million; Standard Oil Co. of California, to $154 million from $305 million; and Atlantic Richfield Co., to $120 million from $140 million.

William Miner, actuary with the Wyatt Co., has suggested possible explanations for the decline in contributions by corporate sponsors.

"Hard economic times" have led companies to lay off workers and to grant smaller pay increases, he said. Fewer employees, each receiving a lower raise translates to reduced retirement benefit liabilities for some companies — and to reduced contributions.

For the same reason, there has been "general belt-tightening," and companies are choosing the lower end of the range of contribution levels set for them by their actuaries, Mr. Miner said.

He added that the high investment returns firms earned in 1982 are beginning to show themselves in actuarial calculations.

Indeed, investment returns have been above average for the past five years. The median equity fund had a compound annual return during that time of better than 16%, and the median fixed-income fund had a return of better than 9%.

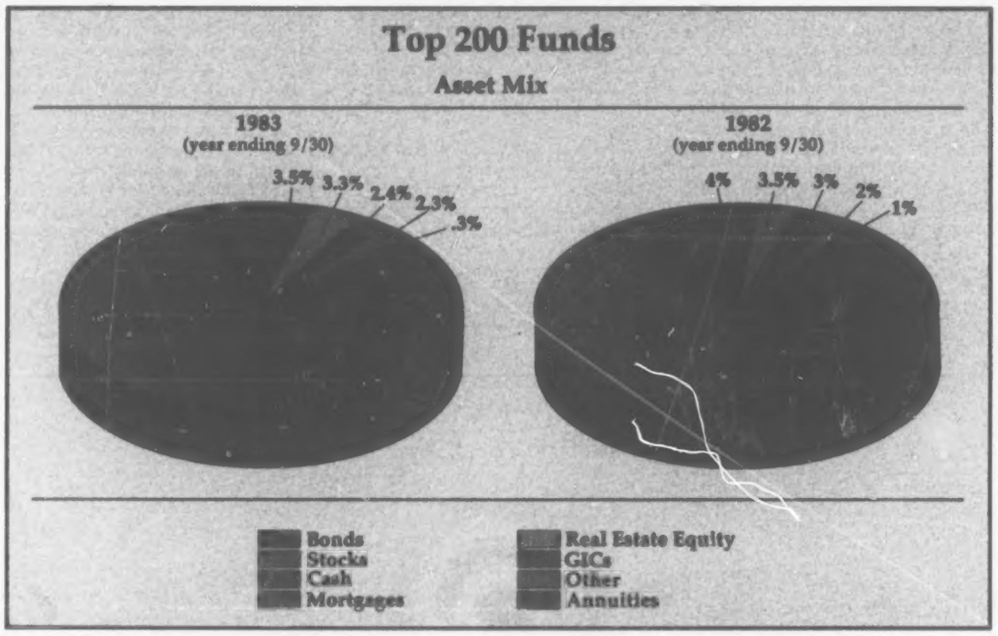
As a result, pension funds in recent years have been increasing their assumed investment returns, thus reducing the needed contributions.

Under pressure from shrinking budgets, public funds also are cutting contributions.

Between 1982 and 1983, the Washington State Investment Board's contributions dropped to $400 million from $550 million; Los Angeles County Employees Retirement System, to $272 million from $330 million; Iowa Public Employees Retirement System, to $110 million from $175 million; and the Kansas Public Employees Retirement System, to $94 million from $160 million.

Some funds that had to pay out more in benefits saw cuts in contributions from their sponsors.

The California Public Employees Retirement System's contributions dropped slightly in 1983 to $1.3 billion, from $1.4 billion in 1982. Its benefits grew to about $1.06 billion from $962 million. ■



Survey method

The information on employee benefit funds in this issue was developed in several stages.

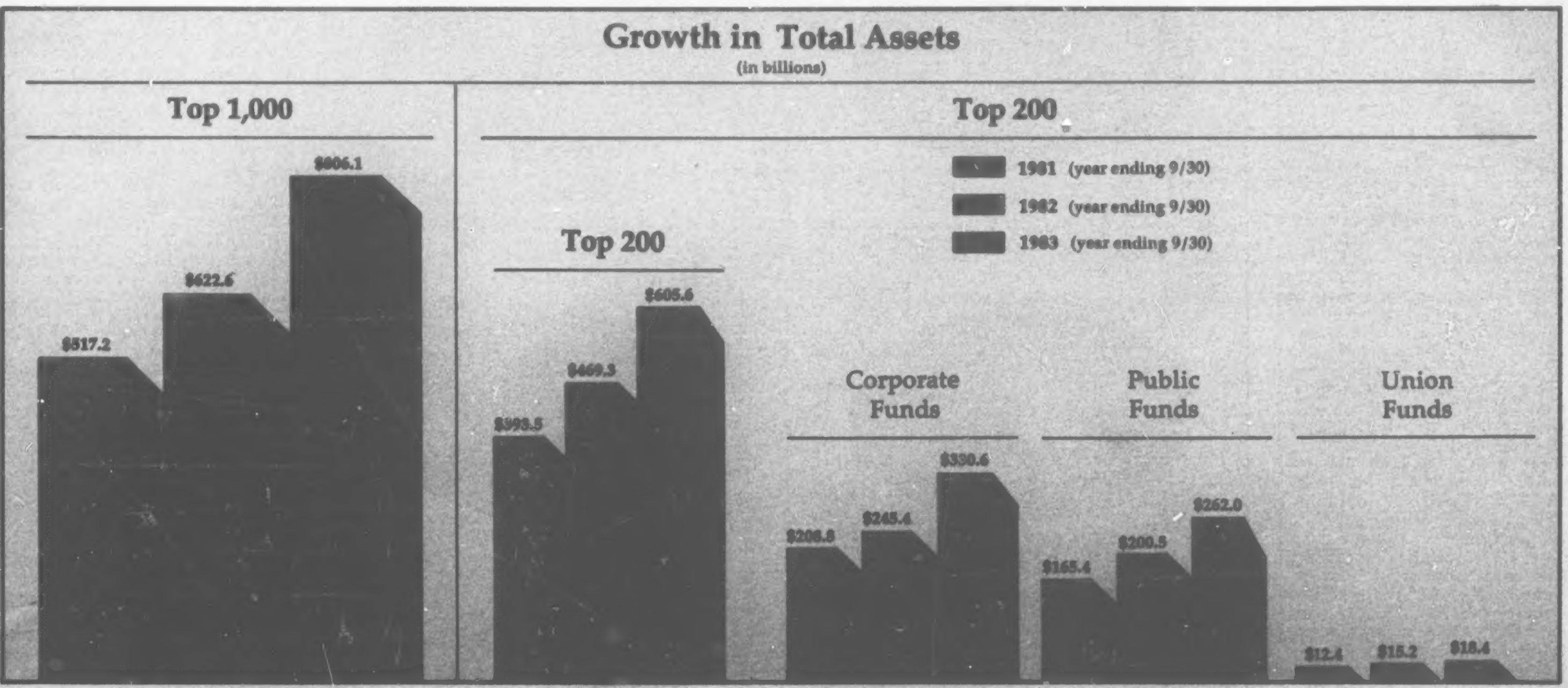
Money Market Directories Inc., Charlottesville, Va., furnished *Pensions & Investment Age* with the names and assets of approximately 1,100 fund sponsors. Money Market Directories annually publishes detailed information on more than 20,000 tax-exempt funds.

Questionnaires were sent to the funds on the list and from the responses, the Top 200 and Top 1,000 were identified.

Where no response was received from a sponsor, either from a questionnaire or, in the case of Top 200 funds, a follow-up phone call, information from the Money Market Directory was used.

Unless otherwise stated, the information reflects the operations of the funds as of Sept. 30, 1983.

Money Market Directories Inc. is located at 360 E. Market St., Charlottesville, Va. 22901. ■



PBGC assets top $1 billion

WASHINGTON — The Pension Benefit Guaranty Corp.'s assets grew to $1.1 billion from $835 million during the 12 months ending Sept. 30, 1983.

The agency is not included in *Pensions & Investment Age's* roster of the top 200 pension funds, even though it pays out pension benefits to more than 100,000 participants.

Edwin M. Jones, its outgoing executive director, asserts the government agency is akin to an insurance company because of the annuities it must pay out to participants whose terminated pension plans it trustees. Critics disagree, saying the agency is a unique corporation.

The agency, which guarantees pension benefits up to a fixed level ($1,602.27 per month for plans terminating in 1984), assumes trusteeship for plans whose assets do not cover vested benefits.

As of Sept. 30, the PBGC had $1.1 billion in assets. The present value of its liabilities was about $1.5 billion. Mr. Jones said preliminary estimates show the agency's deficit rose by $100 million during the past year.

The PBGC had discretion for $800 million of the $1.1 billion total, according to Charles C. Tharp, the agency's deputy executive director, who oversees investments. Of that, about $400 million was in two revolving funds, which consist of annual premiums paid by employers.

The Employee Retirement Income Security Act requires that those assets be invested in Treasury issues or government-backed obligations. However, the Treasury Department again rejected agency appeals to invest in non-Treasury securities, such as Ginnie Maes, which have a higher yield.

Pacific Investment Management Co., Newport Beach, Calif., manages $350 million of those funds. About $50 million in revolving fund assets are in cash and run internally.

Another $400 million in assets were invested at the PBGC's discretion. Of that, $100 million was transferred in June from an equity account run by Forstmann-Leff Associates of New York to PIMCO to be invested in long-term Ginnie Maes. Forstmann-Leff was terminated. The agency's remaining equity managers are Alliance Capital Management Inc., New York, and Putnam Advisory Co. Inc., Boston.

The balance, which is more than $300 million, represents assets from plans pending termination, employer liability, receivables, notes relating to financial commitments and other sources. The agency also has $10 million in real estate investments, inherited from plans it has taken over. It manages those properties internally. Guaranteed investment contracts and other insurance contracts amount to less than $25 million; the agency liquidates such contracts upon assuming control of plan assets.

As of Sept. 30, its asset allocation was 35% to 40% in equities, with the balance in fixed income. State Street Bank & Trust Co. is the master trustee.

Key personnel are John Hotchkis, partner in Hotchkis and Wiley, Los Angeles, who chairs the PBGC's Advisory Committee investment subcommittee, and John MacKinnon, treasurer.

Assets surge 30% to $806 billion . . .

Continued from page 3

1982, 25 funds established dedicated bond portfolios to pay retired benefits. In 1983, only six more funds dedicated. The total amount in dedicated funds climbed to $6.6 billion, an increase of 27%.

- While the number of funds investing internationally increased by nine, the dollar amount invested overseas increased 82% to $6.8 billion.
- The amount of assets invested in GICs by the 200 largest funds actually declined by 15% to $9.8 billion.
- The assets of the largest 25 pension plans grew by 30.6% to $284 billion, while the assets of the largest 25 profit-sharing plans grew by 29.1% to $17.3 billion.

The amazing growth of the nation's non-federal retirement systems is reflected in the 154 private and state and local government retirement plans with assets of at least $1 billion, up from 127 in 1982's survey and 97 in 1981.

There are 72 funds with more than $2 billion in assets, compared with 59 in '82, and 25 funds with more than $5 billion, compared with 20.

The average asset mix of the top 200 funds showed a significant increase in equity exposure and significant decreases in most other investment media as of Sept. 30.

However, much of the increase in equity exposure and decrease in other investments can be attributed to the increase in market value of the equity holdings in the 12-month period.

The survey showed the average equity position increased to 44.2% from 37%, while the average bond position decreased to 34.9% from 39%. The average cash position declined to 8.2% from 10.5%; the real estate equity position declined to 3.3% from 3.5%; and the mortgage exposure declined to 3.5% from 4%.

Despite the strength of the U.S. dollar and the U.S. stock markets, the amount of money invested in foreign markets by U.S. pension funds almost doubled in the year ended Sept. 30, climbing to $6.8 billion.

However, most of this was from increased commitments by funds that already had international investments, and from market appreciation as the number of funds investing overseas increased to 76 from 67 in the previous survey.

The United Nations Joint Staff Pension Fund still has the largest international commitment of any fund in the Top 200 — $1.3 billion. It is followed by International Business Machines, $978 billion; E.I. du Pont de Nemours & Co., $410 billion; and Mobil Corp., $300 billion.

Despite the strong stock market and extraordinary returns by some investment managers, indexing continued to be attractive to large funds.

In the year ended Sept. 30, the amount of Top 200 fund assets indexed increased by 51%, of which 44% would have been due to the market movement. The number of funds indexing their assets increased to 45 from 39 the previous year and 34 two years ago.

The AT&T pension plan had, by far, the greatest amount of indexed assets — $8.5 billion — but this might change with the breakup of the company and its pension fund. There is no guarantee that the seven new operating companies will continue to index any part of the $4 billion to $5 billion in assets each will receive. However, AT&T is expected to continue to index at least part of the $18 billion to $20 billion it will retain.

Following AT&T, the largest indexers were the New York City Employees fund, $2.5 billion; California Public Employees, $2 billion; Maryland State Retirement, $1.5 billion; and Ford Motor Co., $1.3 billion.

The Top 200 funds also continued to increase their interest in alternative investments. The number of funds using financial futures to hedge or enhance their returns doubled during 1983 to 26, and the number using venture capital increased 53% to 58.

The number of funds using options increased to 49 from 41, and the number investing in oil and gas development programs increased to 29 from 20.

Real estate investments increased to $14.9 billion from $12.8 billion a year ago as eight new funds committed themselves to this medium, taking the total number of Top 200 funds using real estate to 113.

Among the funds with significant real estate positions were the AT&T fund, $2.75 billion; the Ohio State Teachers, $1.12 billion; IBM, $809 million; Exxon Corp., $515 million; and the Western Conference of Teamsters, $505 million.

The decline in interest rates in late 1982 and early 1983 apparently slowed the rolling over of maturing GICs as the amount of assets in such contracts held by the Top 200 funds actually declined 15% to $9.8 billion, although the number of funds with GIC investments increased by seven to 77.

United Technologies has $1.5 billion in insured contracts; United Air Lines has $470 million; the Southern Baptist Convention has $456 million; and the Detroit Retirement Systems have $422 million.

The interest rate decline also slowed the growth of dedicated bond funds, although the number of companies with such funds increased to 31 from 25, and the amount of assets dedicated increased to $6.6 billion from $5.2 billion. Dedicated bond funds, in which bond portfolios are structured so that their cash flows exactly match the specific liabilities as they fall due, totaled less than $1 billion two years ago.

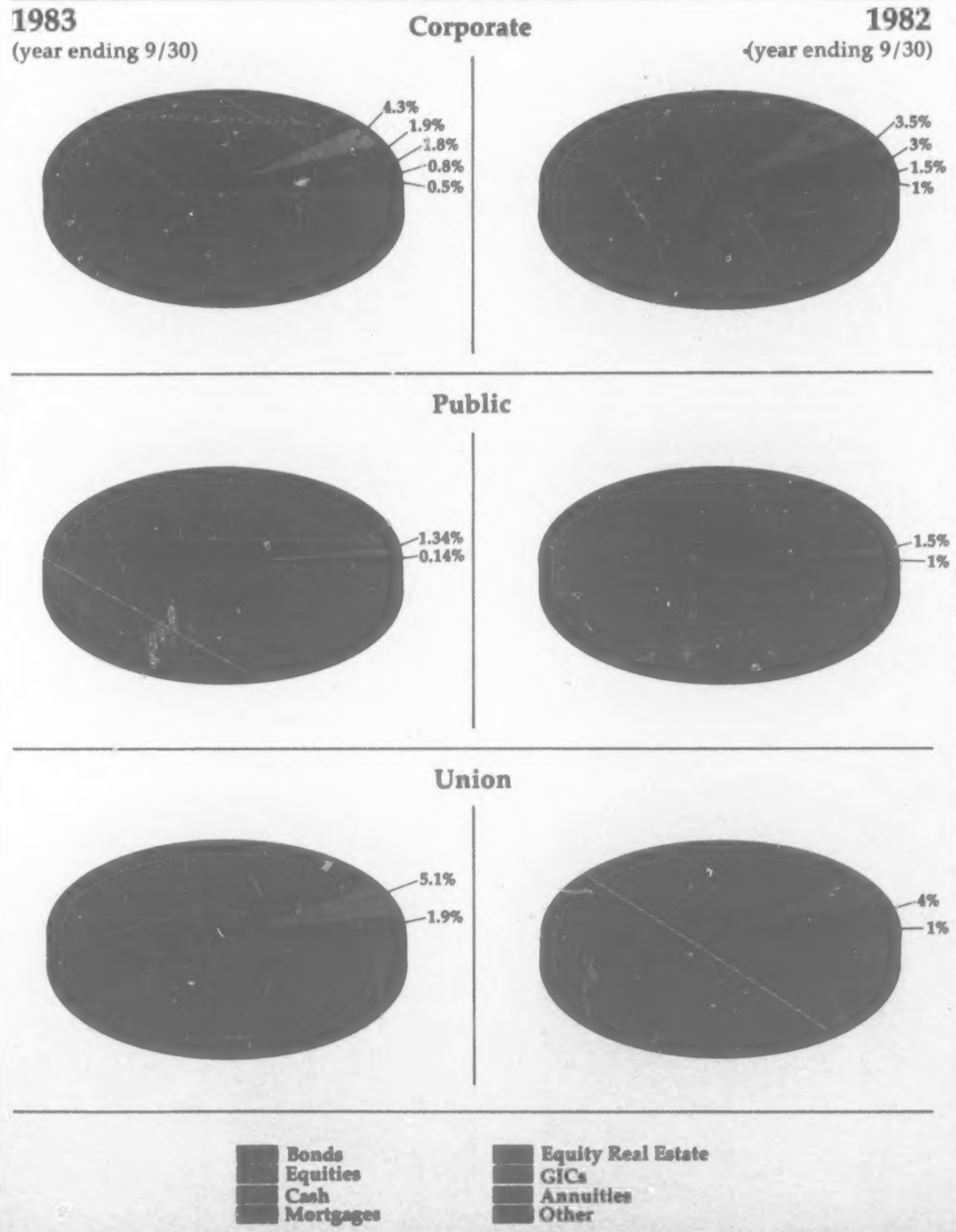
Among the retirement plans with dedicated bond funds were International Harvester, a $688 million fund; Gulf Oil Corp., a $545 million fund; Firestone Tire & Rubber, a $520 million fund; the Western Conference of Teamsters, $513 million; and American Air Lines, $500 million.

Pension funds seeking extraordinary long-term returns have moved into venture capital investments. Fifty-eight funds now have venture capital investments, with the average commitment among those using such investments being about 1% of assets.

Funds using venture capital include Allied Corp., Alcoa, Armco, Atlantic Richfield, Chicago Teachers, Colorado Public Employees, Deere & Co., Eaton Corp., FMC Corp., Eli Lilly, New York State Common, Ohio Public Employees, J.C. Penney, Sperry Corp., TRW Inc., Warner Lambert, IBM and Standard Oil (Ind.).

On the other hand, some funds are seeking protection from inflation and have moved into oil and gas programs. Twenty-eight funds, including Allied, Atlantic Richfield, Commonwealth Edison, International Telephone and Telegraph, Merck & Co., Signal Cos., United Technologies and Xerox, have invested in oil and gas programs seeking long-term inflation protection. While the number of companies using financial futures either to enhance returns or to hedge risks doubled to 26 in the year ended Sept. 30, the number of firms using options to enhance returns increased only to 49 from 41.■

Top 200 asset mix 1983 vs. 1982



Top 200 pension funds/sponsors

(Assets in $ millions)

1.	AT&T	61,218
2.	New York State Common	20,500
3.	California Public Employees	20,436
4.	New York City Employees	19,676
5.	General Motors Corp.	19,500
6.	General Electric Co.	11,993
7.	New York State Teachers	11,300
8.	California State Teachers	10,500
9.	IBM	10,118
10.	N.J. Investment Division	9,032
11.	Ford Motor Co.	8,900
12.	Texas Teacher System	8,612
13.	Michigan State Employees	8,271
14.	Wisconsin Investment Board	7,900
15.	E.I. du Pont de Nemours	7,867
16.	Ohio Teachers Retirement	7,810
17.	Ohio Public Employees	7,700
18.	U.S. Steel and Carnegie	7,310
19.	North Carolina Retirement	6,998
20.	Exxon Corp.	6,588
21.	Florida State Board	6,205
22.	Pa. School Employees	5,949
23.	Minnesota SBI	5,202
24.	Sears, Roebuck & Co.	5,100
25.	Washington State Board	5,000
26.	Teamsters, Central States	4,886
27.	GTE Service Corp.	4,800
28.	Eastman Kodak	4,728
29.	Teamsters, Western	4,671
30.	Boeing Co.	4,392
31.	Rockwell International	4,282
32.	Georgia State Systems	4,214
33.	United Technologies	4,200
34.	Pennsylvania State	4,159
35.	University of California	4,012
36.	L.A. County Employees	4,000
37.	Shell Pension Trust	3,907
38.	Lockheed Corp.	3,810
39.	Oregon Public Employees	3,800
40.	Maryland State Systems	3,757
41.	McDonnell Douglas	3,723
42.	Colorado Public Employees	3,682
43.	Illinois Teachers	3,600
44.	Alabama Retirement	3,506
45.	Westinghouse Electric	3,500
46.	United Nations Joint Staff	3,394
47.	Virginia Supplemental	3,275
48.	Allied Corp.	3,200
49.	United Air Lines Inc.	3,170
50.	Arizona State System	3,157
51.	Mobil Oil Corp.	3,000
52.	Standard Oil Co. (Ind.)	2,985
53.	Tennessee Consolidated	2,967
54.	Standard Oil of California	2,943
55.	Caterpillar Tractor Co.	2,750
56.	Hughes Aircraft Co.	2,724
57.	Prudential Insurance	2,654
58.	South Carolina Retirement	2,652
59.	Connecticut Systems	2,600
60.	United Mine Workers	2,523
61.	General Dynamics	2,517
62.	Atlantic Richfield Co.	2,500
63.	Mass. Employ. & Teachers	2,400
64.	Union Carbide Corp.	2,400
65.	Bethlehem Steel Corp.	2,352
66.	Texas Employees	2,351
67.	RCA Corp.	2,300
68.	Monsanto Co.	2,125
69.	Missouri Public School	2,072
70.	Gulf Oil Corp.	2,051
71.	Sperry Corp.	2,021
72.	Hawaii Employees	2,013
73.	Iowa Public Employees	1,979
74.	Pacific Gas & Electric	1,920
75.	Detroit Retirement Systems	1,917
76.	Phillips Petroleum Co.	1,906
77.	American Airlines	1,900
78.	Trans World Airlines	1,819
79.	Aluminum Co. of America	1,816
80.	Metropolitan Life Insurance	1,796
81.	Texaco Inc.	1,792
82.	Goodyear Tire & Rubber	1,788
83.	*Kansas Public Employees*	*1,777*
84.	Illinois Municipal	1,775
85.	Procter & Gamble Co.	1,761
86.	ITT Corp.	1,692
87.	Utah State Systems	1,665
88.	J.C. Penney Co.	1,663
89.	Louisiana Teachers	1,656
90.	Delta Air Lines Inc.	1,650
91.	Xerox Corp.	1,650
92.	San Francisco City & County	1,640
93.	Mississippi Public	1,578
94.	Tenneco Inc.	1,575
95.	Northrop Corp.	1,556
96.	Illinois SBI	1,555
97.	Deere & Co.	1,531
98.	The LTV Corp.	1,526
99.	Signal Cos. Inc.	1,516
100.	R.J. Reynolds Industries	1,514
101.	Armco Inc.	1,509
102.	Electrical Workers	1,508
103.	Illinois State Universities	1,501
104.	General Foods Corp.	1,500
105.	Chrysler Corp.	1,490
106.	Grumman Corp.	1,483
107.	United Methodist Pension	1,467
108.	Chicago Teachers	1,465
109.	Conoco Inc.	1,445
110.	Ohio Police and Firemen	1,421
111.	Dow Chemical Co.	1,400
112.	Eastern Air Lines	1,400
113.	3M Co.	1,387
114.	L.A. City Fire & Police	1,382
115.	Alaska State System	1,372
116.	Sun Co.	1,345
117.	Boilermakers, Blacksmiths	1,344
118.	Owens-Illinois Inc.	1,341
119.	Dart & Kraft Inc.	1,326
120.	Kentucky Teachers	1,325
121.	Ohio School Employees	1,301
122.	Martin Marietta Corp.	1,300
123.	Pan Am World Airways	1,295
124.	Standard Oil Co. (Ohio)	1,295
125.	Aetna Life & Casualty	1,271
126.	Tennessee Valley Authority	1,266
127.	Consolidated Edison	1,261
128.	The Southern Co. System	1,250
129.	TRW Inc.	1,239
130.	International Paper Co.	1,237
131.	Raytheon Co.	1,225
132.	Kentucky Retirement	1,213
133.	Marathon Oil Co.	1,200
134.	Nevada Public Employees	1,200
135.	International Harvester	1,190
136.	Inland Steel	1,167
137.	Indiana Public Employees	1,163
138.	Southern Baptist Convention	1,155
139.	Commonwealth Edison Co.	1,153
140.	Honeywell Inc.	1,125
141.	Textron Inc.	1,113
142.	L.A. City Employees	1,100
143.	Louisiana State Employees	1,090
144.	Union Oil Co. of California	1,083
145.	Citibank	1,078
146.	Continental Group Inc.	1,075
147.	Republic Steel Corp.	1,071
148.	World Bank Staff	1,046
149.	FMC Corp.	1,035
150.	*National Steel Corp.*	*1,027*
151.	PPG Industries	1,018
152.	Southern California Edison	1,017
153.	Bakery and Confectionary	1,000
154.	Firestone Tire & Rubber	1,000
155.	New York Life Insurance	997
156.	Travelers Corp.	993
157.	Oklahoma Teachers	990
158.	Nat'l Rural Electric Co-op	985
159.	Hercules Inc.	976
160.	Getty Oil	969
161.	McDermott International Inc.	945
162.	Operating Engineers	944
163.	Celanese Corp.	900
164.	Bechtel Power Corp.	898
165.	CIGNA Corp.	892
166.	United Presbyterian Church	892
167.	Southern New England Tel.	863
168.	Reynolds Metals Co.	859
169.	Texas Instruments Inc.	850
170.	John Hancock Mutual Life	847
171.	Philip Morris Inc.	839
172.	Arkansas Teachers	826
173.	Greyhound Corp.	826
174.	American Can Co.	808
175.	Litton Industries Inc.	803
176.	The Episcopal Ministers	802
177.	Dresser Industries	800
178.	Eaton Corp.	800
179.	Eli Lilly & Co.	800
180.	Halliburton Co.	785
181.	City of Milwaukee	774
182.	Philadelphia Municipal	774
183.	I.A.M. National Pension	770
184.	Baltimore Retirement	764
185.	Florida Power & Light	760
186.	Marine Engineers	756
187.	L.A. Water & Power	754
188.	Sandia National Labs	750
189.	Teledyne Inc.	742
190.	American Bar Retirement	731
191.	Abbott Laboratories	730
192.	Indiana State Teachers	727
193.	Batus Inc.	725
194.	Merck & Co.	725
195.	New Mexico Educational	725
196.	Ashland Oil Inc.	724
197.	American Electric Power	714
198.	Warner-Lambert Co.	710
199.	Houston Retirement System	705
200.	Army and Air Force	703
	TOTAL	605,647

Ranking of funds/sponsors 201-1,000

Rank	Fund/sponsor	Location	Assets
201.	Manville Corp.	Denver	691
202.	Montgomery Ward	Chicago	688
203.	North American Philips	New York	686
204.	Montana Board	Helena, Mont.	682
205.	Rohm & Haas	Philadelphia	680
206.	New Mexico Employees	Santa Fe, N.M.	670
207.	Delaware Employees	Dover, Del.	661
208.	Idaho PERS	Boise, Idaho	659
209.	Mich. Muni. Employees	Lansing, Mich.	656
210.	Maine State	Augusta, Maine	655
211.	Bristol-Myers	New York	655
212.	Jewel Companies	Chicago	655
213.	Pacific Lighting	Los Angeles	642
214.	United Tele.	Shawnee Mission	640
215.	Crown Zellerbach	San Francisco	639
216.	N. Calif. Retail Clerks	Walnut Creek	638
217.	Whirlpool Corp.	Benton Hbr., Mich.	636
218.	Union Pacific	New York	635
219.	Manufacturers Hanover	New York	634
220.	Upjohn Co.	Kalamazoo, Mich.	634
221.	Financial Institutions	White Plains, N.Y.	630
222.	Chicago Police	Chicago	629
223.	Federated Dept. Stores	Cincinnati	628
224.	Kaiser-Permanente	Oakland, Calif.	626
225.	Colt Industries	New York	625
226.	Consumers Power	Jackson, Mich.	624
227.	Borg Warner	Chicago	621
228.	Columbia Gas System	Wilmington, Del.	619
229.	American Elect. Power	Columbus, Ohio	616
230.	Timken Co.	Canton, Ohio	616
231.	Colgate-Palmolive	New York	615
232.	Pfizer Inc.	New York	610
233.	B.F. Goodrich	Akron, Ohio	614
234.	Olin Corp.	Stamford, Conn.	606
235.	Texas Utilities	Dallas	604
236.	Chicago Municipal	Chicago	602
237.	CBS Inc.	New York	600
238.	General Tire & Rubber	Akron, Ohio	600
239.	Combustion Engr.	Stamford, Conn.	600
240.	American Cyanamid	Wayne, N.J.	600
241.	Arkansas PERS	Little Rock, Ark.	598
242.	Corning Glass	Corning, N.Y.	591
243.	Scott Paper Co.	Philadelphia	591
244.	Burroughs Corp.	Detroit	585
245.	Dana Corp.	Toledo, Ohio	580
246.	Duke Power	Charlotte, N.C.	579
247.	McGraw-Edison	Rolling Meadows,Ill.	576
248.	NCR Corp.	Dayton, Ohio	575
249.	NADA Retirement Trust	Dayton, Ohio	575
250.	Ok. Public Employees	Oklahoma City	573
251.	Motorola	Corning, N.Y.	564
252.	Champion Intl.	Stamford, Conn.	560
253.	K mart Corp.	Troy, Mich.	560
254.	Wyoming System	Cheyenne, Wyo.	560
255.	Phila. Electric	Philadelphia	557
256.	Dun & Bradstreet	New York	555
257.	W.R. Grace	New York	555
258.	Kaiser Aluminum	Oakland, Calif.	555
259.	Ariz. Public Safety	Phoenix	553
260.	American Standard Inc.	New York	550
261.	Niagara Mohawk Power	Syracuse, N.Y.	550
262.	United Parcel	Greenwich, Conn.	550
263.	Burlington Inds.	Greensboro, N.C.	547
264.	United Food Workers	Chicago	547
265.	Texas Municipal	Austin	541
266.	Boise Cascade	Boise, Idaho	539
267.	InterNorth Inc.	Omaha, Neb.	539
268.	Northwest Airlines	St. Paul, Minn.	535
269.	CIBA-GEIGY	Ardsley, N.Y.	530
270.	Ethyl Corp.	Richmond, Va.	530
271.	Mass. Institute of Tech.	Cambridge, Mass.	529
272.	N.H. Retirement	Concord, N.H.	526
273.	Middle S. Utilities	New Orleans	523
274.	Carpenters, So. Cal.	Los Angeles	522
275.	YMCA	New York	522
276.	Aramco Services	Houston	520
277.	Hallmark Cards	Kansas City, Mo.	520
278.	Brown and Root	Houston	519
279.	Times Mirror	Los Angeles	516
280.	American Red Cross	Washington	515
281.	Retail Employ., Whls.	New York	508
282.	Amax Inc.	Greenwich, Conn.	507
283.	Operating Engrs.#612	Seattle	505
284.	Wayne Co. System	Detroit	501
285.	Consolidated Rail Corp.	Philadelphia	500
286.	Electrical Mfg. Industry	Flushing, N.Y.	500
287.	Johnson and Johnson	New Brunswick, N.J.	500
288.	Minneapolis Employees	Minneapolis	500
289.	Missouri Retirement	Jefferson City, Mo.	494
290.	S. Dakota Retirement	Pierre, S.D.	492
291.	City Investing	New York	488
292.	Control Data	Minneapolis	488
293.	Hoffman LaRoche	Nutley, N.J.	485
294.	Polaroid Corp.	Cambridge, Mass.	480
295.	Singer Co.	Stamford, Conn.	480
296.	Consolidated Nat. Gas	New York	472
297.	Household Intl.	Prospect Hts., Ill.	472
298.	Public Serv. E&G	Newark, N.J.	472
299.	Gen.Public Util.	Parsippany, N.J.	471
300.	Beatrice Foods	Chicago	470
301.	Campbell Soup	Camden, N.J.	467
302.	Central & Southwest	Dallas	463
303.	San Diego County	San Diego	460
304.	Detroit Edison Co.	Detroit	457
305.	Owens-Corning.	Toledo, Ohio	453
306.	Machinists, Natl. HQ.	Washington	453
307.	American Lutheran	Minneapolis	452
308.	American Brands	New York	450
309.	Masters, Mates & Pilots	New York	450
310.	Cooper Industries	Houston	450
311.	Nabisco Brands	Parsippany, N.J.	450
312.	Northeast Utilities	Hartford, Conn.	450
313.	Savings Banks R.S.	New York	450
314.	State Farm Insurance	Bloomington, Ill.	450
315.	Carpenters, N. Cal.	San Francisco	448
316.	Ingersoll Rand	Woodcliff Lake, N.J.	447
317.	Cook County	Chicago	445
318.	Libbey-Owens-Ford	Toledo, Ohio	441
319.	SmithKline Beckman	Philadelphia	440
320.	Sherwin-Williams	Cleveland	439
321.	Food, Comm. Workers	Inglewood, Calif.	438
322.	Farmland Industries	Kansas City, Mo.	437
323.	Fluor Corp.	Irvine, Calif.	437
324.	St. Regis Corp.	New York	436
325.	Operating Engrs. #3	San Francisco	435
326.	IC Industries	Chicago	434
327.	Norfolk Southern	Roanoke, Va.	432
328.	Cummins Engine Co.	Columbus, Ind.	429
329.	N.D. Investment Board	Bismarck, N.D.	429
330.	Operat. Engrs., So. Cal.	Pasadena, Calif.	428
331.	Lutheran Church, Mo.	St. Louis, Mo.	428
332.	Cincinnati Retirement	Cincinnati	425
333.	Safeway Stores Inc.	Oakland, Calif.	421
334.	Kellogg Co.	Battle Creek, Mich.	420
335.	Champion Intl.	Stamford, Conn.	419
336.	Budd Co.	Troy, N.Y.	418
337.	Alameda County Ret.	Oakland, Calif.	418
338.	Armstrong World Ind.	Lancaster, Pa.	418
339.	Avco Corp.	Greenwich, Conn.	418
340.	Schlumberger LTD.	New York	417
341.	NL Industries	New York	415
342.	Laborers, Texas	Dallas	412
343.	Freuhauf Corp.	Detroit	410
344.	Orange County Ret.	Santa Ana, Calif.	409
345.	White Consolidated	Cleveland	408
346.	Sheet Metal Workers	Washington	408
347.	Winn-Dixie Stores	Jacksonville, Fla.	407
348.	El Paso Co.	Houston	405
349.	Farm Credit Inst.	Louisville, Ky.	404
350.	Fairchild Industries	Germantown, Md.	400
351.	J.P. Stevens	New York	400
352.	Emhart Corp.	Hartford, Conn.	400
353.	CSX Corp.	Cleveland	395
354.	Northern States Power	Minneapolis	394
355.	N.E. Teamsters	Boston	393
356.	Mass. Bay Ret.	Boston	390
357.	Ralston Purina	St. Louis	390
358.	Republic Airlines	Minneapolis	390
359.	Avon Products	New York	387
360.	Contra Costa Ret.	Martinez, Calif.	386
361.	Allis-Chalmers	Milwaukee	382
362.	Cincinnati Milacron	Cincinnati	381
363.	Denver School Emps.	Denver	377
364.	Blue Cross	Chicago	375
365.	Milwaukee Retirement	Milwaukee	375
366.	San Diego Employees	San Diego	375
367.	Dallas Retirement	Dallas	373
368.	Southern Pacific	San Francisco	371
369.	SPS Technologies Inc.	Newton, Pa.	370
370.	General Mills Inc.	Minneapolis	370
371.	Neb. State Investment	Lincoln, Neb.	367
372.	Deseret Mutual	Salt Lake City	367
373.	Motion Picture Ind.	Studio City, Calif.	366
374.	Georgia Pacific.	Atlanta	365
375.	Pepsico Inc.	Purchase, N.Y.	363
376.	Dayton Hudson	Minneapolis	363
377.	Teamsters Cent. Pa.	Reading, Pa.	360
378.	Sacramento County	Sacramento, Calif.	359
379.	San Bernardino County	Calif.	359
380.	Time Inc.	New York	359
381.	Kimberly-Clark	Neenah, Wis.	356
382.	American Baptist	New York	352
383.	Rhode Island Ret.	Providence	350
384.	U.S. Air Inc.	Washington	350
385.	Continental Tele.	Atlanta	350
386.	Quaker Oats	Chicago	350
387.	Borden Inc.	New York	345
388.	Great A&P Tea	Montvale, N.J.	345
389.	Peoples Energy	Chicago	345
390.	Baltimore G&E	Baltimore	345
391.	Allied Stores Corp.	New York	343
392.	Levi Strauss	San Francisco	342
393.	Mead Corp.	Dayton, Ohio	342
394.	Panhandle Eastern	Houston	340
395.	Gulf & Western	New York	340
396.	Uniroyal Inc.	Middlebury, Conn.	339
397.	Ex-Cell-O Corp.	Troy, Mich.	338
398.	Stauffer Chemical	Westport, Conn.	336
399.	Harris Corp.	Melbourne, Fla.	331
400.	Westvaco Corp.	New York	330
401.	Chicago Transit	Chicago	330
402.	Norton Co.	Worcester, Mass.	330
403.	Southland Corp.	Dallas	327
404.	Pillsbury Co.	Minneapolis	326
405.	R.R. Donnelly	Chicago	326
406.	General Signal	Stamford, Conn.	325
407.	New England Elect.	Westboro, Mass.	321
408.	Phelps Dodge	New York	320
409.	National Distillers	New York	319
410.	Ohio Edison	Akron, Ohio	319
411.	Weyerhaeuser Co.	Tacoma, Wash.	319
412.	Clothing & Textile	New York	319
413.	Inco Ltd.	New York	318
414.	San Jose City	San Jose, Calif.	318
415.	N.Y. Carpenters	New York	315
416.	Food, Comm. Workers	Washington	313
417.	Cleveland Electric	Cleveland	313
418.	E G and G Inc.	Wellesley, Mass.	311
419.	Santa Fe Inds.	Chicago	310
420.	Memphis City	Memphis, Tenn.	307
421.	Intl. Teamsters	Washington	306
422.	Graphic Comm.	Washington	305
423.	Allegheny Intl.	Pittsburgh	305
424.	Chicago Laborers	Chicago	305
425.	Tektronix Inc.	Beaverton, Ore.	305
426.	Chicago Firemen	Chicago	301
427.	Rexnord Inc.	Milwaukee	301
428.	Air Products	Allentown, Pa.	300
429.	Typographical Union	Colorado Springs	300
430.	Crane Co.	New York	300
431.	Electrical Workers	New York	300
432.	Occidental Petroleum	Los Angeles	300
433.	Pennsy. Light	Allentown, Pa.	297
434.	N.Y. Longshoremen	New York	296
435.	Pitney Bowes	Stamford, Conn.	296
436.	A.O. Smith Corp.	Milwaukee	294
437.	Mich. Consolidated Gas	Detroit	293
438.	F.W. Woolworth Co.	New York	293
439.	Battelle Institute	Columbus, Ohio	292
440.	Alaska Teamsters	Anchorage	292
441.	AMF Inc.	White Plains, N.Y.	291
442.	Schering-Plough Corp.	Kenilworth, N.J.	291
443.	Mars Inc.	Mclean, Va.	290
444.	Transco Energy Co.	Houston	289
445.	Louisiana School	Baton Rouge, La.	289
446.	Midwest Oper. Engrs.	Countryside, Ill.	288
447.	U.S. Gypsum Co.	Chicago	287
448.	Teamsters	Chicago	286
449.	Kroger Co.	Cincinnati	285
450.	Montgomery County	Rockville, Md.	285
451.	Sundstrand Corp.	Rockford, Ill.	283
452.	So. Cal. Pipe Trades	Los Angeles	282
453.	Clark Equipment Co.	Buchanan, Mich.	282
454.	Squibb Corp.	New York	281
455.	So. Cal. Laborers	Los Angeles	281
456.	De Luxe Check Printers	St. Paul, Minn.	281
457.	Allegheny Power	New York	280
458.	McGraw-Hill Inc.	New York	280
459.	Amer. Hosp. Supply	Evanston, Ill.	280
460.	Houston Industries Inc.	Houston	279
461.	R.H. Macy & Co.	New York	278
462.	State-Boston Ret.	Boston	278
463.	Consolidated Foods	Chicago	277
464.	E-Systems Inc.	Dallas	276
465.	Burlington North.	Seattle	275
466.	ENSERCH Corp.	Dallas	275
467.	Pennwalt Corp.	Philadelphia	275
468.	Wheeling-Pittsburgh	Pittsburgh	275
469.	May Depart. Stores	St. Louis	273
470.	Western Pa. Teamsters	Pittsburgh	270
471.	Digital Equipment	Maynard, Mass.	269
472.	Screen Actors	N. Hollywood	268
473.	Emerson Electric Co.	St. Louis	268

Ranking of funds/sponsors 201-1,000

Rank	Fund/sponsor	Location	Assets
474.	Amstar Corp.	New York	267
475.	CPC International	Englewood Cliffs	267
476.	National Maritime	New York	267
477.	Cincinnati G&E	Cincinnati	266
478.	American Musicians	New York	266
479.	Union Electric	St. Louis	266
480.	ICI Americas	Wilmington, Del.	266
481.	Arthur D. Little	Cambridge, Mass.	266
482.	Gillette	Boston	266
483.	Coca Cola	Atlanta	265
484.	Union Electric	St. Louis	264
485.	Inter-Local GCIU	Chicago	264
486.	Baltimore County	Baltimore	263
487.	Miami Employees	Miami	260
488.	Cincinnati Bell	Cincinnati	260
489.	Aerospace Corp.	El Segundo, Calif.	260
490.	United Cement	Elk Grove Vil., Ill.	260
491.	Sonat Inc.	Birmingham, Ala.	256
492.	Vermont State	Montpelier, Vt.	256
493.	Atlanta Retail Clerks	Atlanta	256
494.	Union Camp Corp.	Wayne, N.J.	256
495.	American Motors	Southfield, Mich.	255
496.	Koppers Co.	Pittsburgh	254
497.	SCM Corp.	New York	252
498.	Continental Air	Houston	251
499.	Roadway Express	Akron, Ohio	250
500.	Ralph M. Parsons	Pasadena, Calif.	250
501.	Hormel & Co.	Austin, Minn.	250
502.	Tribune Co.	Chicago	250
503.	Seattle Employees	Seattle	250
504.	Savings Banks Employ.	Boston	250
505.	Painters & Allied Trades	Washington	246
506.	Lever Bros.	New York	249
507.	Amp Inc.	Harrisburg, Pa.	245
508.	Gt. North. Nekoosa	Stamford, Conn.	245
509.	Walgreen Co.	Deerfield, Ill.	245
510.	Laborers, Construction	Forest Park, Ill.	245
511.	Anchor Hocking	Lancaster, Ohio	244
512.	Lumber & Sawmill	Portland, Ore.	242
513.	Marsh & McLennan	New York	241
514.	Carpenter Tech.	Reading, Pa.	240
515.	Oscar Mayer	Madison, Wis.	240
516.	Pennzoil	Houston	239
517.	Teamsters Conference	Utica, N.Y.	238
518.	Amsted Industries	Chicago	237
519.	Building Trades	Milwaukee	237
520.	Heinz	Pittsburgh	237
521.	Missouri Employees	Jefferson City	237
522.	Stone & Webster	New York	237
523.	Seafarers, Great Lakes	Camp Springs, Md.	237
524.	Amer. Nat'l Resources	Detroit	235
525.	Minneapolis Teach.	Minneapolis	235
526.	San Diego Gas & Elec.	San Diego	234
527.	Calif. Butcher's	Oakland, Calif.	233
528.	Northern Ill. Gas	Aurora, Ill.	233
529.	Ogden	New York	233
530.	American TV & Radio	New York	232
531.	Presby. Church (USA)	Atlanta	232
532.	Nalco Chemical	Oak Brook, Ill.	230
533.	Anheuser-Busch	St. Louis	232
534.	ASARCO Inc.	New York	230
535.	Cabot Corp.	Boston	229
536.	Marriott	Washington	228
537.	Gould Inc.	Rolling Meadows	228
538.	Amer. Broadcasting	New York	227
539.	Reader's Digest	Pleasantville, N.Y.	226
540.	Brunswick Corp.	Skokie, Ill.	226
541.	Ventura County Empl.	Ventura, Calif.	226
542.	Norton Simon	New York	226
543.	Akzona Inc.	Asheville, N.C.	225
544.	Blue Bell Inc.	Greensboro, N.C.	225
545.	Allen-Bradley Co.	Milwaukee	224
546.	Fresno County Empl.	Fresno, Calif.	224
547.	Graphic Arts	Washington	224
548.	Milliken	Chicago	224
549.	Container Corp.	Chicago	221
550.	McKesson Corp.	San Francisco	220
551.	Champion Spark Plug	Toledo, Ohio	219
552.	Amer. Home Products	New York	219
553.	American Medical Assn.	Chicago	219
554.	Baxter Travenol	Deerfield, Ill.	218
555.	Serv. Empl. Local #32	New York	218
556.	S.Ca. Rapid Transit	Los Angeles	217
557.	Va. Electric & Power	Richmond	217
558.	Fort Worth Employees	Texas	216
559.	Wisc. Electric	Milwaukee	211
560.	Jos. Seagram	New York	215
561.	Joy Manufacturing	Pittsburgh	215
562.	Tex. East. Transmission	Houston	215
563.	GK Technologies	Greenwich, Conn.	215
564.	Mercantile Stores	New York	215
565.	American Stores	Salt Lake City	215
566.	Maritime Assn.-I.L.A.	Houston	214
567.	Atlanta Employees	Atlanta	212
568.	Coastal Corp.	Houston	211
569.	Rapid American Corp.	New York	211
570.	Amfac Inc.	San Francisco	210
571.	Lear Siegler	Santa Monica	210
572.	Becton Dickinson	Paramus,N.J.	209
573.	AMCA International	Hanover, N.H.	209
574.	Nat. Auto. Sprinkler Ind.	Silver Spring, Md.	208
575.	Western Air	Los Angeles	207
576.	GrandMet USA	Montvale, N.J.	207
577.	Jacksonville Emps.	Jacksonville, Fla.	206
578.	Interlake	Oakbrook, Ill.	206
579.	Kern Employees	Bakersfield, Calif.	205
580.	Jim Walter Corp.	Tampa, Fla.	205
581.	Boy Scouts	Irving, Texas	204
582.	Gates Corp.	Denver	204
583.	Grayba Electric	St. Louis	204
584.	ICMA Corp.	Washington	204
585.	S.C. Johnson	Racine, Wis.	203
586.	Texas Gas Trans.	Owensboro, Ky.	203
587.	Sheet Metal Workers	Los Angeles	203
588.	Cleveland-Cliffs	Cleveland	200
589.	Diamond Intl.	New York	200
590.	GATX Corp.	Chicago	200
591.	Outboard Marine	Waukegan, Ill.	200
592.	Colo. Public Service	Denver	200
593.	San Mateo Employees	Redwood City, Calif.	200
594.	District 65-U.A.W.	New York	200
595.	Colo. Fire & Police	Denver	200
596.	Airco	Montvale, N.J.	200
597.	Carpenters, Ill.	Geneva, Ill.	200
598.	Carolina Power	Raleigh, N.C.	199
599.	Printing Pressman	Los Angeles	197
600.	Dallas Police & Fire	Dallas	197
601.	Briggs & Stratton	Milwaukee	197
602.	Operating Engineers	Countryside, Ill.	197
603.	Denver Employees	Denver	196
604.	Rohr Industries	Chula Vista, Calif	196
605.	Paper Industry	Nashville	196
606.	Memphis Light	Memphis, Tenn	195
607.	Sterling Drug Inc.	New York	195
608.	Belk, Leggett & Efird	Charlotte, N.C.	195
609.	Lukens Inc.	Coatsville, Pa.	194
610.	Sandoz Inc.	East Hammer, N.J.	194
611.	Centel Corp.	Chicago	192
612.	Inter-American Bank	Washington	192
613.	Maytag Co.	Newtown, Iowa	191
614.	Tecumseh Products	Tecumseh, Mich.	191
615.	Ohio Laborers AGC	Columbus, Ohio	191
616.	Johnson & Higgins	New York	191
617.	National Fuel Gas Co.	New York	191
618.	Flint Employees	Flint, Mich.	190
619.	Laborers, Nat. Hdqtrs.	Washington	190
620.	Amerada Hess	New York	190
621.	Longshoremen	Baltimore	189
622.	Piedmont Aviation	Winston-Salem, N.C.	188
623.	Flying Tiger Lines	Los Angeles	187
624.	Carpenters	Detroit	186
625.	Boston Edison Co.	Boston	185
626.	St. Louis Public School	St. Louis	184
627.	Hartford Employees	Hartford, Conn.	184
628.	Freeport-McMoran	N.J.	183
629.	Newmont Mining	N.J.	182
630.	Chicago Food Workers	Chicago	180
631.	Typographical Union	Chicago	179
632.	Diamond Shamrock	Irving, Texas	177
633.	Potlatch Corp.	San Francisco	177
634.	Columbus Electric	Columbus, Ohio	176
635.	Upholsters Int. Union	Philadelphia	176
636.	Gerber Products Co.	Fremont, Ill.	175
637.	Brooklyn Union Gas	Brooklyn, N.Y.	175
638.	Mass. Carpenters	Burlington, Mass.	175
639.	East St. Louis School	East St. Louis, Ill.	175
640.	Washington Gas Light	Washington	175
641.	Kaiser Steel	Fontana, Calif.	174
642.	Western Union	Upper Saddle, N.J.	174
643.	Operating Engineers	Birmingham, Mich.	173
644.	Norfolk Employees	Norfolk, Va.	173
645.	Public Employees	Hammond, Ind.	173
646.	Rochester Gas	New York	172
647.	Pittston Co.	Greenwich, Conn.	172
648.	Wash. Metal Traders	Seattle	171
649.	Teamsters	Philadelphia	171
650.	New York Electric	Ithaca, N.Y.	170
651.	Stroh Brewery	Detroit	171
652.	Adolph Coors	Golden, Colo.	171
653.	United Energy	Houston	170
654.	Pacific Maritime Assn.	San Francisco	170
655.	Moorman Mfg.	Quincy, Ill.	169
656.	Baton Rouge Emp.	Baton Rouge, La.	167
657.	Illinois Power	Decatur, Ill.	167
658.	Teams.560, 617, 641	Union City, N.J.	167
659.	Zenith Radio	Glenview, Ill.	167
660.	Wickes Companies	Santa Monica, Calif.	166
661.	Alco Standard	Valley Forge, Pa.	165
662.	International Minerals	Mundelein, Ill.	166
663.	Longshoremen	San Francisco	165
664.	Texas Gulf	Stamford, Conn.	165
665.	Johnson Controls	Milwaukee	165
666.	Sacramento Employees	Calif.	164
667.	Commerce Clearing	Chicago	164
668.	Florida Power Corp.	St. Petersburg, Fla.	164
669.	National Industrial	Newark, N.J.	164
670.	Superior Oil	Houston	164
671.	Cincinnati Milacron	Cincinnati	164
672.	Federal-Mogul	Detroit	163
673.	Hershey Foods	Hershey, Pa.	163
674.	AM International	Chicago	163
675.	Iron Workers	San Francisco	163
676.	Sybron Corp.	Rochester, N.Y.	162
677.	Arlington Employees	Arlington, Va.	162
678.	BASF Wyandotte	Parsippany, N.J.	162
679.	Frontier Airlines	Denver	161
680.	Kerr-McGee	Oklahoma City	161
681.	Mayo Foundation	Rochester, Minn.	161
682.	Austin Employees	Texas	160
683.	Cone Mills	Greensboro, N.C.	160
684.	Hearst Corp.	New York	160
685.	Gleason Works	Rochester, N.Y.	160
686.	Knight-Ridder	Miami	160
687.	Voluntary Hospitals	New York	160
688.	Springs Industries	Fort Mills, S.C.	160
689.	Sanders Assoc.	Nashua, N.H.	159
690.	Phoenix Employees	Phoenix, Ariz.	159
691.	Pacific Power	Portland, Ore.	158
692.	Equifax Inc.	Atlanta, Ga.	158
693.	Marmon Group	Chicago	158
694.	Cyclops	Pittsburgh	157
695.	Howmet Aluminum	Greenwich, Conn.	157
696.	CARGILL Inc.	Minneapolis	155
697.	Major League Players	New York	155
698.	Carpenters	Chicago	155
699.	Arkla Inc.	Shreveport, La.	154
700.	Iron Workers, Ohio	Dayton, Ohio	154
701.	Tandy	Fort Worth, Texas	154
702.	Square D.	Palatine, Ill.	153
703.	Vulcan Materials	Birmingham, Ala.	152
704.	Cameron Iron Works	Houston	152
705.	Carpenters	Cleveland	152
706.	Armstrong Rubber	New Haven, Conn.	152
707.	United Brands	New Jersey	151
708.	Carnation	Los Angeles	151
709.	Cal. Service Employees	San Francisco	151
710.	Beech Aircraf	Wichita, Kan.	150
711.	Publix Super Market	Lakeland, Fla.	150
712.	Park Employees	Chicago	150
713.	National Car	Chicago, Ill.	150
714.	Stanley Works	New Britain, Conn.	150
715.	Cultural Institutions	New York	150
716.	Gannett	Rochester, N.Y.	150
717.	Deseret Mutual	Salt Lake City	149
718.	Hughes Tool Co.	Houston	149
719.	Acme-Cleveland	Cleveland	149
720.	Morrison-Knudsen	Boise, Idaho	148
721.	Acco Babcock	Fairfield, Conn.	148
722.	Ill. Tool Works	Chicago	147
723.	Curtiss-Wright	Woodridge, N.J.	147
724.	Duquesne Light	Pittsburgh	146
725.	Nestle	White Plains, N.Y.	146
726.	Capital Holding Corp.	Louisville, Ky.	146
727.	Brockway Inc.	Brockway, Pa.	146
728.	Bankers Life	Chicago	145
729.	Salt River Project	Tempe, Ariz.	145
730.	Utah Power	Salt Lake City	145
731.	Kansas City Empl.	Kansas City	144
732.	Texstar	Grand Prairie, Texas	144
733.	Royal Indemnity	New York	144
734.	Anderson, Clayton	Houston	143
735.	Potomac Electric	Washington	143
736.	Arthur Andersen & Co.	Chicago	143
737.	Thomas J. Lipton	Englewood Cliffs	143
738.	Navy Resale System	Staten Island, N.Y.	143
739.	Continental Grain Co.	New York	142
740.	Chubb	New York	142
741.	Intl. Bricklayers	Washington	142
742.	Caltex	Dallas	142
743.	Tampa Employees	Tampa, Fla.	141
744.	Santa Fe International	Alhambra, Calif.	141
745.	Mobay Chemical	Pittsburgh	141
746.	Delmarva Power & Light	Wilmington, Del.	141

Ranking of funds/sponsors 201-1,000

Rank	Fund/sponsor	Location	Assets
747.	Brown Group	St. Louis, Mo.	140
748.	Phila. Carpenters	Philadelphia	140
749.	Daniel International	Greenville, S.C.	140
750.	Dravo	Pittsburgh	140
751.	Electrical Contractors	Chicago	140
752.	Plumbers & Pipefitters	Chicago	140
753.	Bricklayers Intl.	Washington	140
754.	National Gypsum	Dallas	140
755.	Hospital Corp	Nashville, Tenn.	139
756.	Castle & Cooke	San Francisco	138
757.	Hawaiian Electric	Honolulu	138
758.	Oklahoma Gas	Oklahoma City	138
759.	IBEW Local #1186	Honolulu	138
760.	Univ. of Minnesota	St.Paul	138
761.	Mitre Corp.	Bedford, Mass.	138
762.	Agway Inc.	Syracuse, N.Y.	137
763.	Birmingham Employees	Birmingham, Ala.	137
764.	ARA Services	Philadelphia	137
765.	Oakland Police	Calif.	137
766.	New York Times	New York	137
767.	A.C. Nielson Co.	Northbrook, Ill.	135
768.	Baltimore Retail Clerks	Baltimore	136
769.	Missouri Highway	Jefferson City, Mo.	136
770.	Steelcase Inc.	Grand Rapids, Mich.	135
771.	Texas Iron Workers	Houston	135
772.	Consolidated Papers	Wisconsin Rapids	135
773.	St.Joe Minerals Corp.	New York	134
774.	Fresno Employees	Fresno, Calif.	134
775.	Foxboro Co.	Foxboro, Mass.	134
776.	National Telephone	Washington	134
777.	Hanna Mining	Cleveland	133
778.	James River Corp.	Richmond, Va.	133
779.	Western Greyhound	San Francisco	133
780.	Warner Comm.	New York	133
781.	Williams Cos.	Tulsa, Okla.	133
782.	Richardson-Vicks Inc.	Wilton, Conn.	133
783.	Pickands Mather & Co.	Cleveland	132
784.	Marine Engineers	Brooklyn	132
785.	Associated Dry Goods	New York	132
786.	Loews Corp.	New York	132
787.	Kansas City Power	Kansas City, Mo.	131
788.	American Horchst	Somerville, N.J.	130
789.	First Boston	New York	130
790.	Carpenters of Penn.	Pittsburgh	130
791.	Grand Union	Elmwood Park, N.J.	130
792.	Midland-Ross	Cleveland	130
793.	St.Paul Teacher's	St.Paul, Minn.	130
794.	Wang Labs.	Lowell, Mass.	130
795.	Foster Wheeler	Livingston, N.J.	129
796.	Trane Co.	La Crosse, Wis	129
797.	Public Service Indiana	Plainfield, Ind.	128
798.	St. Louis Employees	St.Louis	128
799.	No. Calif. Laborers	San Francisco	128
800.	Insurance Co.	New York	128
801.	Hammermill Paper	Erie, Pa.	127
802.	Davy Inc.	Cleveland	127
803.	McDonald's Corp.	Oak Brook, Ill.	126
804.	Fairfax County	Fairfax, Va.	126
805.	Harnischfeger	Milwaukee	126
806.	Dayton Power	Dayton, Ohio	126
807.	Rochester Telephone	New York	126
808.	Wean United	Youngstown, Ohio	125
809.	A.B. Dick Co.	Chicago	126
810.	Humana Inc.	Louisville, Ky.	125
811.	Copperweld	Pittsburgh	125
812.	Auto Workers	Detroit	125
813.	Alexander & Alexander	Baltimore	125
814.	Lone Star Industries	Greenwich, Conn.	125
815.	Santa Barbara Empl.	California	125
816.	Teamsters Local #701	North Brunswick	125
817.	Houdaille Industries	Ft. Lauderdale, Fla.	125
818.	North Dakota Empl.	Bismarck, N.D.	125
819.	Western Wash. Carp.	Seattle	124
820.	Steelworkers	Pittsburgh	123
821.	Operating Engrs.	Newark, N.J.	123
822.	Interco Inc.	St.Louis	123
823.	St. Joaquin Employees	Stockton, Calif.	123
824.	Retail Workers, Drug	Madison Heights	123
825.	Louisana Pacific Co.	Portland, Ore.	122
826.	Mapco Inc.	Tulsa, Okla.	121
827.	Hiram Walker & Sons	Detroit	121
828.	Puget Sound Power	Bellevue, Wash.	121
829.	Peabody Holding Co.	St.Louis	121
830.	Cessna Aircraft Co.	Wichita, Kan.	121
831.	So. Ca. Auto Club	Los Angeles	120
832.	Longshoremen	New Orleans, La.	120
833.	Varian Assoc.	Palo Alto, Calif.	120
834.	Burroughs Wellcome	Research Tri., N.C.	120
835.	Signode Industries	Glenview, Ill.	119
836.	Revere Copper & Brass	New York	119
837.	Fort Howard Paper	Green Bay, Wis.	119
838.	Arizona Public Service	Phoenix, Ariz.	119
839.	Marin County Emps.	San Rafael, Calif.	119
840.	Electrical Workers	Anchorage, Alaska	119
841.	West. Penn. Laborers	Pittsburgh	119
842.	NVF Co.	Yorklin, Del.	119
843.	Thiokol Corp.	Newtown, Pa.	118
844.	Sheet Metal Workers	Dublin, Calif.	118
845.	St. Louis Police	St.Louis	118
846.	Ideal Basic Industs.	Denver	118
847.	Oakland County Empl.	Pontiac, Mich.	117
848.	ACF Industries	New York	116
849.	American Petrofina Inc.	Dallas	115
850.	IU International Corp.	Philadelphia	115
851.	Reliance Electric Co.	Cleveland	115
852.	Gulf States Utilities	Beaumont, Texas	115
853.	Arkansas Highway	Little Rock	115
854.	Iron Workers	Newark, N.J.	115
855.	Stanadyne	Windsor, Conn.	114
856.	Media General	Richmond, Va.	114
857.	Shelby Employees	Memphis, Tenn.	114
858.	Toledo Edison	Toledo, Ohio	114
859.	TPF&C	Philadelphia	114
860.	McKinsey & Co.	New York	113
861.	Dan River	Toledo, Ohio	113
862.	So. Calif. Plasterers	Los Angeles	113
863.	Atlantic City Electric Co.	Pleasantville, N.J.	112
864.	Morton-Thiokol Inc.	Chicago	112
865.	Wis. Public Service	Green Bay, Wis.	112
866.	Jos. Schlitz Brewing	Milwaukee	112
867.	Harsco	Camp Hill, Pa.	112
868.	U.S. Automobile Assn.	San Antonio, Texas	111
869.	Grange Mutual	Nampa, Idaho	111
870.	Teamsters 395	Phoenix	111
871.	William Wrigley Jr. Co.	Chicago	111
872.	Mi. Blue Cross	Detroit	110
873.	W.W. Grainger	Skokie, Ill.	110
874.	Chesebrough-Ponds	Greenwich, Conn.	110
875.	Bangor Punta	Greenwich, Conn.	110
876.	Witco Chemical	New York	110
877.	Yellow Freight	Shawnee Mission	109
878.	Kansas City School	Kansas City, Mo.	109
879.	Northwestern Steel	Sterling, Ill.	108
880.	Bucyrus-Erie	Milwaukee	108
881.	Oper. Engineers	Washington	108
882.	Norris Industries	Long Beach, Calif.	108
883.	Minnegasco Inc.	Minneapolis	107
884.	Pioneer Corp.	Amarillo, Texas	107
885.	Variable Annuity Life	Houston	107
886.	SKF Industries	King of Prussia, Pa.	107
887.	Leo Burnett Co.	Chicago	106
888.	Beneficial	Wilmington, Del.	106
889.	Lincoln Electric	Cleveland	105
890.	Louisana Land	New Orleans	105
891.	Paccar Inc.	Bellevue, Wash.	105
892.	Oper. Engrs. #18	Columbus, Ohio	105
893.	St. Louis Firemen	St. Louis	105
894.	Black & Decker	Towson, N.J.	105
895.	American Int. Group	New York	105
896.	Figgie International	Richmond, Va.	104
897.	Hyster Co.	Portland, Ore.	104
898.	Wickita Employees	Wichita, Kan.	104
899.	Ambac Industries	Dearborn, Mich.	104
900.	Commonwealth Energy	Cambridge, Mass.	104
901.	Machinists #9	Bridgeton, Mo.	103
902.	Mass. Gen. Hosp.	Boston	103
903.	Nat. Football League	New York	103
904.	Ladish Co.	Cudahy, Wis.	103
905.	Thyssen-Bornemisza	New York	103
906.	Retail Clerks	Los Angeles	102
907.	Dow Jones	New York	102
908.	Wisconsin Gas	Milwaukee	102
909.	Omaha Public Power	Omaha, Neb.	102
910.	Central Ill. Light	Peoria, Ill.	102
911.	Tacoma Employees	Tacoma, Wash.	102
912.	Arvin Industries	Columbus, Ind.	101
913.	Sheller-Globe	Toledo, Ohio	101
914.	A.E. Staley	Decatur, Ill.	101
915.	N.Y. Stock Exchange	New York	101
916.	Tampa Gen. Employees	Tampa, Fla.	101
917.	Ill.Carpenters	Geneva, Ill.	101
918.	GAF Corp.	New York	100
919.	Sealed Power	Muskegon, Mich.	100
920.	YWCA Employees	New York	100
921.	Mass. Laborers	Newton, Mass.	100
922.	Southwest Airlines	Dallas	100
923.	Syntex	Palo Alto, Calif.	100
924.	Masco Corp.	Taylor, Mich.	100
925.	San Antonio Firemen	San Antonio, Texas	100
926.	Methodist Church	New York	100
927.	Univ. of So. Cal.	Los Angeles	100
928.	Lowe's Companies	N. Wilkesboro, N.C.	100
929.	Pontiac Employees	Pontiac, Mich.	100
930.	Wal-Mart Stores	Bentonville, Ariz.	100
931.	Dayco Corp.	Dayton, Ohio	99
932.	Wyman-Goodman	Worcester, Mass.	99
933.	Parker-Hannifin	Cleveland	99
934.	Barnes Group	Bristol, Conn.	99
935.	Automotive Industries	Oakland	98
936.	Machinists, Local #701	Chicago	98
937.	Summa Corp.	Las Vegas	97
938.	Va. Teamsters #83	Richmond, Va.	97
939.	U.S. Bora	Los Angeles	97
940.	Revlon	New York	97
941.	Bowater Corp.	Greenwich, Conn.	97
942.	Alaska Carriers	Seattle	97
943.	Bell & Howell	Chicago	97
944.	Rubbermaid	Wooster, Mass.	97
945.	Richmond Employees	Richmond, Va.	96
946.	Lubrizol	Wickliffe, Ohio	96
947.	Ohio Casualty Group	Hamilton, Ohio	96
948.	Cannon Mills	Kannapolis, N.C.	96
949.	Hartmarx	Chicago	96
950.	Manitowoc Co.	Manitowoc, Wis.	95
951.	Pennsylvania Municipal	Harrisburg, Pa.	95
952.	Arthur Young	New York	95
953.	Amica Mutual	Providence, R.I.	95
954.	Machinists #67	Washington	95
955.	Whittaker	Los Angeles	95
956.	Eagle-Picher	Cincinnati	94
957.	Operating Engingeers	Norristown, Pa.	94
958.	Commercial Credit Co.	Baltimore	94
959.	Screen Extras, Actors	New York	94
960.	Dillingham	Honolulu	94
961.	Simpson Timber	Seattle	94
962.	MCA Inc.	Universal City, Calif.	93
963.	Directors Guild	Los Angeles	93
964.	Alexander & Baldwin	Honolulu	93
965.	Stanislaus County	Modesto, Calif.	93
966.	Iron Workers #25	Birmingham, Mich.	93
967.	Long Island Lighting	Mineola, N.Y.	92
968.	E.W. Scripps	Cincinnati	92
969.	Mohasco	Amsterdam, N.Y.	92
970.	Prentice Hall	Englewood Cliffs	92
971.	Grtr. Cleveland Hosp.	Cleveland	92
972.	Scovill	Waterbury, Conn.	92
973.	Washington Post	Washington	92
974.	American Cancer	New York	92
975.	Certainteed Corp.	Valley Forge, Pa.	91
976.	Nat. Starch & Chemical	Bridgewater, N.J.	91
977.	Food Workers #174	New York	91
978.	Teamsters Local #330	West Chicago, Ill.	91
979.	Plumbers, Local #638	New York	91
980.	CENEX	Inver Grove, Minn.	90
981.	Wyatt Co.	Washington	90
982.	Combined Insurance	Northbrook, Ill.	90
983.	Courier-Journal	Louisville, Ky.	90
984.	Univ. of Miami	Coral Gables, Fla.	90
985.	Bricklayers	New York	90
986.	Cent. Ill. Pub. Serv.	Springfield, Ill.	89
987.	Reliance Group	New York	89
988.	El Paso Employees	El Paso, Texas	89
989.	Liberty Mutual Ins.	Boston	89
990.	Goldman Sachs	New York	88
991.	Omaha School Empl.	Omaha, Neb.	88
992.	Raymond International	Houston	88
993.	Hotel Trades Council	New York	88
994.	White Castle System	Columbus, Ohio	88
995.	Gries Dynacast	New Rochelle, N.Y.	88
996.	Service Empl. #144	New York	88
997.	Laborers, Masons	New York	88
998.	Iron Workers	Washington	87
999.	Indianapolis Power	Indianapolis	87
1000.	Jack Eckerd Corp.	Clearwater, Fla.	87

On the following pages, *Pensions & Investment Age* presents sketches of the nation's 200 largest pension funds. Included is a listing of their money managers, the allocation of their assets, names of their key investment personnel and highlights of news events at each pension fund during the past year.

a

Abbott Laboratories

	($ millions)
Total assets	730
Pension	380
Profit-sharing	0
Thrift or savings	350
Employer contributions	29
Benefit payments	10

CHICAGO — Abbott Laboratories had $730 million tax-exempt assets as of Sept. 30: $380 million in the pension plan and $350 million in the savings plan. Stocks make up 56% of the portfolio; bonds, 25%; cash, 9%; and equity real estate, 10%.

The fund has no alternative investments, but a $75 million fixed-income portfolio is managed internally.

Equity managers: Jennison & Associates Capital Corp.; Hagler, Mastrovita & Co. Inc. and Rosenberg Capital Management.

Bond manager: Rosenberg Capital Management.

Real estate manager: Equitable Life Assurance.

Continental Illinois Bank & Trust Co. of Chicago is master trustee.

A.G. Olsen is director-employee financial programs.

Aetna Life & Casualty

	($ millions)
Total assets	1,271
Pension	949
Profit-sharing	0
Thrift or savings	322
Employer contributions	69
Benefit payments	54

HARTFORD, Conn. — Aetna Life & Casualty's total employee benefit assets increased by 30% for the year ended Sept. 30.

Total assets were $1.271 billion compared with 1982 assets of $975 million.

Of the total, the pension plan held $949 million, while $315.6 million was in the thrift/savings plan and $6.4 million was the retirement savings or company individual retirement account plan.

All of the pension funds are managed internally at Aetna.

There are roughly $39 million in GICs as well. About 28.3% of total assets is allocated to the insurance company's general asset account, while 4.2% of the total is in long-term guaranty accounts.

Foreign investments constitute about 2.7% of total assets. The entire amount consisted of $25 million in international equities.

The Aetna fund used options as a hedging device for their pension plan investments.

The approximate asset mix was 53.4% stocks, 6.7% bonds, 1.2% cash equivalents, 4.9% real estate equity, and 1.3% mortgages, 28.3% other and 4.2% GICs.

Key individuals in the organization who oversee the investment of funds are Donald G. Conrad, executive vice president and chief financial officer; John C. Lang, vice president and treasurer; and Peter G. Russell, vice president-bond investment division.

Alabama Retirement Systems

	($ millions)
Total assets	3,506
Pension	3,506
Profit-sharing	0
Thrift or savings	0
Employer contributions	228
Benefit payments	171

MONTGOMERY, Ala. — The Retirement Systems of Alabama continued to aggressively finance in-state businesses, making a 15-year, $25 million loan to a United Technologies subsidiary for expansion of factory and office space.

The fund also lent $79 million as part of a $285 million private placement for financing the mortgage on Mellon Bank's new headquarters in Pittsburgh. The internally managed $3.5 billion fund comprises two plans, the $2.4 billion Teachers Retirement System and the $1.1 billion Employees Retirement System. The fund, as a whole, grew 16.2% in the year ending Sept. 30.

As of Sept. 30, the asset mix for the combined systems was 3% stocks, 55.5% bonds, 6.9% cash equivalents and 34% mortgages. Another 0.6%, or $20 million, was invested in GICs purchased from New England Mutual Life.

The fund uses options. The systems also maintain an IRA program for the public employees.

David G. Bronner is secretary-treasurer; Gary Partridge is director of equities; and Cheryl Duke and Hunter Reaves are directors of fixed income.

Alaska State Retirement System

	($ millions)
Total assets	1,372 *
Pension	1,372
Profit-sharing	0
Thrift or savings	0
Employer contributions	154
Benefit payments	59

*As of Aug. 31, 1983

JUNEAU, Alaska — The Alaska State Retirement System hired Citibank and Morgan Guaranty Trust as international equity managers in May.

As of Aug. 31, combined pension assets of the Public Employees Retirement System and the Teachers Retirement System increased 18% to almost $1.4 billion from $1.2 billion the previous year.

The public employees assets total $816 million, and the teachers' assets are $556 million. Of the combined total, $1.1 billion is managed internally by the two funds with $725.6 million in fixed income, and $385.8 million in mortgages. The teachers system still holds $14 million in gold.

Equity managers: Alliance Capital Management and Morgan Guaranty Trust.

International managers: Citibank and Morgan Guaranty Trust.

Equity real estate managers: John Hancock, Aetna, Prudential and Equitable.

The Bank of America is master trustee.

As of Aug. 31, the combined asset mix was 14% stocks, 46% bonds, 7% cash, 5% equity real estate and 28% mortgages.

James Wilson, investment officer, Marty Lentz, investment officer, and Milt Barker, deputy commissioner, oversee the investment management of the funds.

Allied Corp.

	($ millions)
Total assets	3,200
Pension	2,600
Profit-sharing	0
Thrift or savings	600
Employer contributions	240
Benefit payments	0

MORRISTOWN, N.J. — As a result of Allied Corp.'s takeover of Bendix Corp. in 1982, total employee benefit assets more than tripled in the year to $3.2 billion as of Sept. 30.

Five former managers were dropped from various accounts during the consolidation.

A comparison with last year's survey shows equity managers Chesapeake Capital and Lord, Abbett, have joined the team.

It also added oil and gas partnerships to a range of investments including options, venture capital, financial futures, international equities and real estate.

Equity managers: Bankers Trust; Batterymarch; BMI Capital; Capital Guardian; Chesapeake Capital; Delaware Investment; Lincoln Capital; Lord, Abbett; Lynch & Mayer; MacKay-Shields; NSR Management; Verus Capital; Weiss, Peck & Greer.

Bond managers: Morgan Guaranty Trust and Solomon Asset Management.

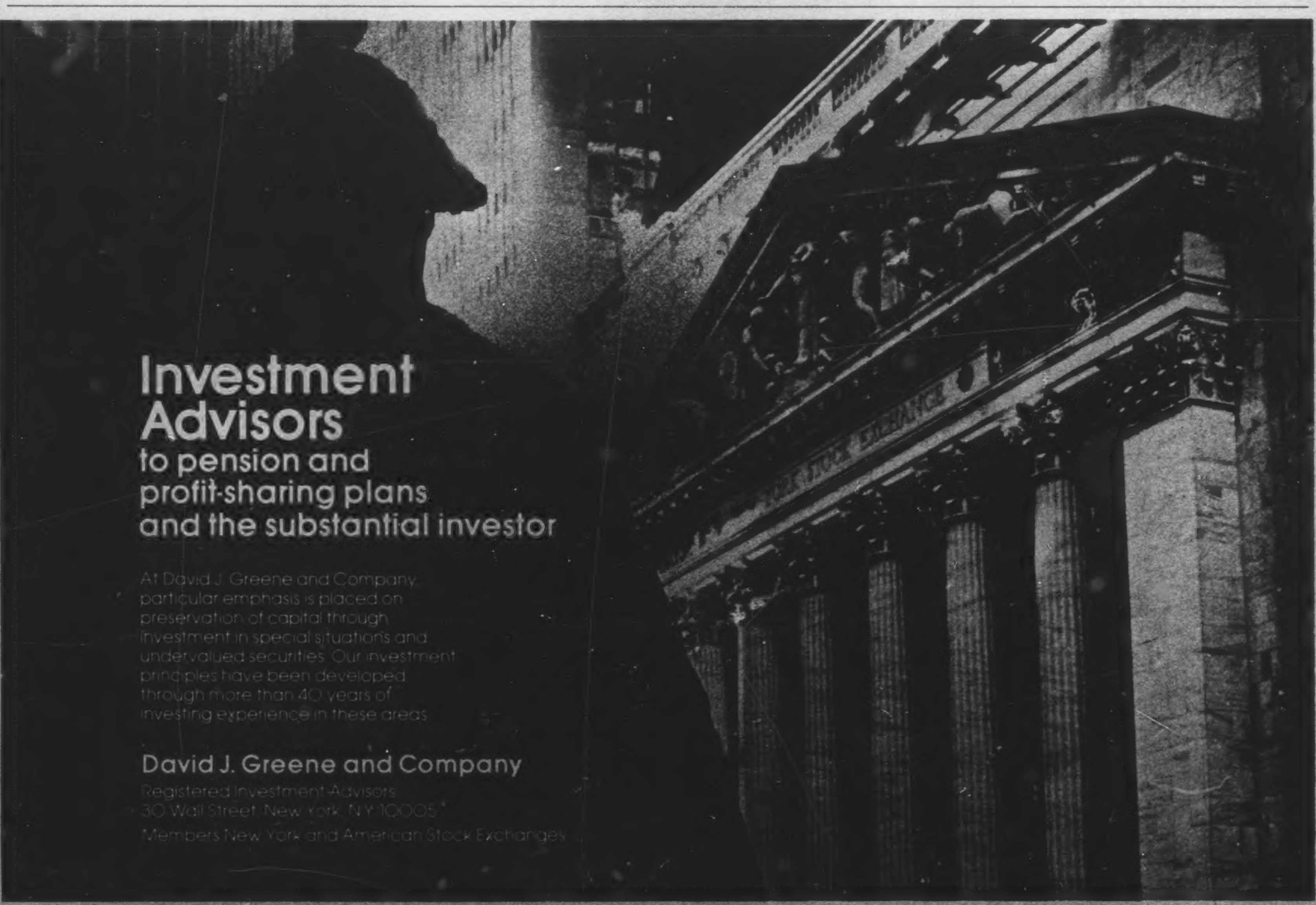
Real estate managers: Aetna Life; Equitable Life; John Hancock; Prudential Insurance; Travelers Insurance; and RREEF.

Options manager: Balch, Hardy & Sheinman.

International managers: Kleinwort, Benson and Morgan Grenfell.

The approximate asset mix was 56% stocks, 22% bonds, 10% cash equivalents; 8% real estate equity; and 4% international.

Northern Trust is master trustee for the pension plans; State Street Bank is master trustee for the savings plan.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Key personnel are Harold W. Buirkle, senior vice president and chief financial officer; Nicholas A. Cameron, vice president-planning and development; and Edward T. Tokar, director-investments.

Aluminum Co. of America

	($ millions)
Total assets	1,816
Pension	1,576
Profit-sharing	0
Thrift or savings	240
Employer contributions	171
Benefit payments	155

PITTSBURGH — The Alcoa fund sold the 2.5 million shares of company stock contributed to it in 1982 and earned an estimated $18.73 million profit.

BEA Associates was appointed in January, receiving an account for active bond management of between $50 million and $55 million.

Ventech Partners, a venture capital limited partnership, also was named to a $3 million portion of fund assets during the first quarter.

Total contributions into the fund were down, $171 million from $190 million in 1982, while benefits paid were up, $155 million from $124 million.

The fund grew by 31% during the 12-month period ending Sept. 30.

Equity managers: Brundage, Story & Rose; Capital Guardian Trust; Crocker Investment Management; Fayez Sarofim; Fred Alger; Frontier Capital; Hathaway & Associates; Morgan Guaranty Trust; Pioneering Management Co.; Stralem & Co.; and Wells Fargo.

Bond managers: BEA Associates; Fischer, Francis, Trees & Watts; Massachusetts Financial Services; Mellon Bank; and Morgan Guaranty.

Real estate managers: Equitable Life; John Hancock; Coldwell Banker; and KREEF.

GIC managers: Metropolitan Life and Travelers Insurance.

International managers: Capital Guardian and Morgan Guaranty.

Venture capital managers: Capital Management Services (Sequoia Funds); Dillon Reed (Concord Fund); Kohlberg, Kravis & Roberts; and Ventech Partners.

The approximate asset mix was 53% stocks, 30% bonds, 11% cash equivalents and 6% real estate equity. Mellon Bank is the master trustee.

Key personnel are Joseph C. Pellegrino, assistant treasurer; Richard J. Forster, manager; and Donna S. Baar, administrative assistant.

American Airlines

	($ millions)
Total assets	1,900
Pension	1,900
Profit sharing	0
Thrift or savings	0
Employer contributions	90
Benefit payments	75

DALLAS — American Airlines contributed $14.6 million worth of cumulative convertible preferred stock to its pension plan in April, in lieu of about 13% of its 1982 cash contribution. The stock was given to four of its equity managers to trade as they would any other stock in the portfolio.

Also, the airline doubled its commitment to international investments during 1983, from $50 million last year to $100 million as of Sept. 30. A dedicated bond portfolio begun in 1982 doubled, standing at $500 million as of Sept. 30.

American's asset allocation to stocks and bonds reversed itself between 1982 and 1983, moving to 55% stocks and 35% bonds. This compares with 33% stocks and 52% bonds as of Sept. 30, 1982. Another 10% is in cash equivalents.

The airline's employee benefit assets increased by more than 26% during the past year.

Balanced managers: Aetna, Alliance Capital Management, Brown Brothers Harriman, Capital Guardian, Citicorp, First National Bank of Boston, RepublicBank Dallas and Vilas-Fischer.

International managers: Morgan Grenfell, N.M. Rothschild and Rowe Price-Fleming.

Options managers: Analytic Investments and Oppenheimer.

Master trustee is RepublicBank Dallas.

J.C. Pope is senior vice president, treasurer and chief financial officer; W.F. Quinn is assistant treasurer; and C.L. Holman is manager-trust investments.

American Bar Retirement Association

	($ millions)
Total assets	731
Pension	110
Profit-sharing	621
Thrift or savings	0
Employer contributions	75
Benefit payments	27

CHICAGO — About 85% of the American Bar Retirement Association's $731 million pension assets were in Keogh plans as of Sept. 30. The asset mix of the two plans is 36% stocks and 64% guaranteed investment contracts at Equitable Life Assurance Society.

Equity managers: Equitable and Capital Guardian Trust Co.

The 10-member trustee board includes Marshall J. Doke Jr., president; L. Clair Nelson, treasurer; and Robert Antognoli, director-treasury services.

American Can Co.

	($ millions)
Total assets	808
Pension	758
Profit-sharing	2
Thrift or savings	48
Employer contributions	100
Benefit payments	95

GREENWICH, Conn. — American Can's employee benefit assets decreased 1.2% to $808 million as of Sept. 30 from $818 million the previous year.

Pension assets increased to $758 million from $733 million in 1982; profit-sharing assets decreased to $2 million from $21 million; and thrift or savings plan assets decreased to $48 million from $64 million.

The company's contribution to all funds decreased from $129 million in 1982 to $100 million in 1983. The company paid $95 million in benefits to retirees in 1983 up from $75 million in 1982.

The reduction in total assets was caused by several corporate divestments and spinoffs, and a restructuring of the pension fund.

The company sold Butterick Fashion Marketing Co. during the year. It sold its U.S. paper operation to James River Corp. in 1982, but IRS approval to transfer the assets to the buyer came in 1983. American Can also sold its Canadian paper operation in 1983 and a few other business and units.

The pension plan also cashed out $140 million in GICs during 1983 and experienced a $38 million loss because of the market value.

In 1983, American Can terminated two equity managers: Brundage Story & Rose and State Street Research & Management. It hired six managers: Fred Alger; Alliance

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Capital; Sanford C. Bernstein; Frontier Capital Management; Spears, Benzak, Soloman & Farrell; and Weiss, Peck & Greer.

Equity managers: Fred Alger; Alliance Capital; Sanford C. Bernstein; Campbell Advisors; Cole Yeager & Wood; Frontier Capital Management; Grantham, Mayo, Van Otterloo; Spears, Benzak, Solomon & Farrell; and Weiss Peck & Greer.

Bond managers: Bankers Trust Co. and Equitable Life.

Real estate managers: JMB Institutional Realty, RREEF and Metropolitan Life.

International managers: Lombard Odier International and Morgan Grenfell Investment Services.

In 1983, the pension fund had $26 million of its assets in foreign markets: $20.8 million in equities and $5.2 million in fixed-income.

The pension fund indexed $206 million. It uses options as a hedging device. The approximate asset mix was 57% stocks, 27% bonds, 12% cash equivalents and 4% real estate equity. Bankers Trust Co. is the master trustee.

The company started a 401(k) savings plan Jan. 1, 1984. It also offers a corporate IRA program.

E.C. Ecker, managing director-pension and investment, and D.A. Kelly, manager-pension and investment, oversee the funds.

American Electric Power Co.

	($ millions)
Total assets	715.0
Pension	553.0
Profit-sharing	0
Thrift or savings	161.5
Employer contributions	26
Benefit payments	22

COLUMBUS, Ohio — American Electric Power Co.'s assets increased 30% in the past year to $714.7 million. Pension assets are $553.2 million and thrift and savings plan assets are $161.5 million.

Balanced managers: BEA, Fayez Sarofim, Thorndike, Doran, Paine & Lewis, and M. Pescatello & Co.

Bond manager: MEG Asset Management.

Venture capital manager: John Hancock.

Real estate manager: Fayez Sarofim.

Master trustee for the pension fund is Irving Trust Co.; Bankers Trust is master trustee for the savings plan.

The approximate asset mix of the pension assets as of Sept. 30 is 60% stocks, 35% bonds, 4% cash equivalents and 1% real estate equity.

Key personnel include G.P. Maloney, senior vice president-finance, and L.G. Zawodniak, director of risk management.

American Telephone & Telegraph

	($ millions)
Total assets	61,218
Pension	53,930
Profit-sharing	0
Thrift or savings	7,288
Employer contributions	2,604
Benefit payments	2,070

NEW YORK — While the assets of AT&T's employee benefit plans were split up among the new AT&T and seven new operating companies starting Jan. 1, 1984, as of Sept. 30, 1982, the $61 billion in assets remained with AT&T.

The new AT&T was expected to get about $18 billion, and each of the new seven operating companies between $4 billion and $5 billion.

The combined pension and savings plan assets grew by 34% in the 12 months ended Sept. 30.

The overall asset mix of the AT&T fund at that time was 55.2% equities, 29.4% bonds, 9.5% cash equivalents, 5.1% real estate, 0.1% international and 0.7% in such nontraditional investments as oil and gas and venture capital. In addition, the fund used options.

AT&T uses 102 investment management organizations:

Aetna Life; Aldrich Eastman & Waltch; Alpine Capital; American Fletcher National Bank; AmeriTrust; AmSouth Bank; David L. Babson; Bank of New York; Bankers Trust; Batterymarch; Boatmen's National Bank; Boston Co.; Brown Brothers Harriman; Brundage Story and Rose.

Also, Capital Guardian Trust; Central National Bank of Cleveland; Chase Investors Management; Chemical Bank; Citibank; Citizens & Southern National Bank; Clarens Associates; CMB Investment Counselors; Coldwell Banker; Corporate Property Investors; Crocker National Bank; Dean Witter; Delaware Investment Advisors; Dodge & Cox; Eastdil Advisors; Eberstadt Asset Management; Equitable Life.

Also, Fayez Sarofim; First City National Houston; First Interstate Bank; First Kentucky Trust;, First Manhattan; First National Bank of Atlanta; First National Bank of Chicago; First National Bank of Minneapolis; First Tennessee; First Wisconsin Trust; Fischer, Francis, Trees & Watts; Goldman Sachs; David J. Greene; Harris Trust; Heitman Realty; IDS Advisory; Indiana National; InterFirst Bank Dallas; Intrawest Asset Management; Investment Counselors of Maryland; Jennison Associates; and John Hancock Insurance.

Also, Lazard Freres; Lincoln Capital Management; Loomis Sayles; Lord Abbett; Manufacturers Hanover; Marine Midland; Massachusetts Financial Services; Mathers & Co.; McCowan Associates; Mellon Bank; Mercantile Safe Deposit & Trust Co.; Mercantile Trust; Midlantic National Bank; Morgan Guaranty; National Bank of Detroit; National City Bank, Cleveland; National Investment Services of America; NCNB; Northern Trust; Pacific Investment Management; Pioneering Management; Provident Capital; Prudential; Putnam Advisory; Republic-Bank Dallas; Rosenberg Capital Management; and RREEF.

Also, Scudder, Stevens & Clark; Seafirst Bank; South Carolina National Bank; Standish Ayer & Wood; State Street Bank; State Street Research & Management; Stein Roe & Farnham; T. Rowe Price; Texas Commerce Bank; Thorndike Doran Paine & Lewis; Travelers; Trust Co. of the West; United Capital Management; U.S. Trust; Wachovia Bank & Trust; Wall Patterson McGrew & Richards; Wellington Management; Wells Fargo Investment Advisors; Wertheim Asset Management; and Western Asset Management.

Real estate managers include Bankers Trust; The Boston Co.; Chemical Bank; Citibank; Coldwell Banker; Corporate Property Investors; Equitable Life; First National Bank of Chicago; Heitman Realty; InterFirst in Dallas; Mercantile Trust; Morgan Guaranty; NCNB; Prudential; RREEF; Seattle First National Bank; U.S. Trust; and Wells Fargo.

Boston Co. Energy Advisors provides guidance on oil and gas investments while Loomis Sayles invests in options.

AT&T manages $1.6 billion in equities internally. It has $8.5 billion indexed, $494 million in dedicated bonds, $200 million invested internationally and $60.9 million in GICs.

The fund's operations are overseen by David P. Feldman, assis-

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tant treasurer; Robert E. Angelica, director; and Roger L. McLaughlin, director.

Arizona State Retirement System

	($ millions)
Total assets	3,157 *
Pension	3,157
Profit sharing	0
Thrift or savings	0
Employer contributions	134
Benefit payments	106

*As of June 30, 1983

PHOENIX — Pension assets of the Arizona State Retirement System increased almost 36% during the past year, from $2.323 billion on June 30, 1982, to $3.157 billion on June 30, 1983. The amount of assets indexed increased by $140 million, bringing the total to $340 million. The amount internally managed dropped by $50 million to $200 million, but continued to be solely short-term investments.

Balanced managers: Alliance Capital Management, Bernstein-Macaulay Inc., Fiduciary Trust, INVESCO Capital Management, Kemper Financial Services and Valley National Bank

The asset mix as of June 30, was 45% stocks, 41% bonds, 7% cash equivalents and 7% mortgages. The biggest change during the past 12 months was in stocks, where the commitment rose to 45% from 33% a year earlier.

Max Sullivan is director of the Arizona system.

Arkansas Teachers Retirement System

	($ millions)
Total assets	826
Pension	826
Profit-sharing	0
Thrift or savings	0
Employer contributions	65
Benefit payments	42

LITTLE ROCK, Ark. — The Arkansas Teachers Retirement System's assets shot up 35.2% to $826 million on Sept. 30, from $611 million in 1982. The fund's asset mix was 40% stocks, 43% bonds, 12% cash and 5% mortgages.

The fund manages $128 million in-house, $40 million in mortgages and $88 million in cash. Non-traditional investments are not used.

E.F. Hutton & Co. is an investment consultant.

Equity manager: Oppenheimer Capital.

Bond manager: Oppenheimer Capital.

Hubert Blanchard is the Arkansas fund's executive director. Mavolene Booth is assistant director-investments.

Armco Inc.

	($ millions)
Total assets	1,509
Pension	1,223
Profit-sharing	14
Thrift or savings	272
Employer contributions	124
Benefit payments	150

MIDDLETOWN, Ohio — Armco Inc.'s $1.2 billion pension fund received a contribution in lieu of cash of $50 million worth of cumulative, convertible preferred Armco stock, added new equity managers and lost its chief investment officer — Mark Smith — all during 1983.

The stock contribution, amounting to about 4.2% of the fund's equity assets, was made to conserve cash. The new equity managers included Alliance Capital Management and Chase Investors.

Mr. Smith had been head of Armco Investment Management. He left to join Meidinger Asset Planning Services Inc., and was replaced by Dennis Furey. Only a year earlier, Mr. Smith had replaced Paul Chenault in that same position.

Armco's total pension assets decreased by about 2.8% between 1982 and 1983, reaching $1.223 billion as of Sept. 30.

About $260 million is managed internally.

Equity managers: Alliance Capital Management, Capital Guardian, Chase Investors, Miller Anderson & Sherrerd and Thorndike, Doran, Paine & Lewis.

Bond managers: Equitable Life Assurance Society and Rosenberg Capital Management.

Real estate manager: Rosenberg Real Estate Equity Fund.

Chase Manhattan Bank is master trustee.

The approximate asset mix as of Sept. 30 was 53.6% stocks, 29% bonds, 4% cash and 13.4% real estate equity.

In addition to Mr. Furey, key investment personnel include G.E. Bedar, vice president and treasurer.

Army and Air Force Exchange Service

	($ millions)
Total assets	703
Pension	693
Profit-sharing	0
Thrift or savings	10
Employer contributions	78.2
Benefit payments	40.6

DALLAS — The Army and Air Force Exchange Service made several manager changes this year. These included a first allocation to international investments: Morgan Grenfell Investment Services Ltd. and Citibank together received $10 million.

Newly appointed fixed-income managers are Hibernia National Bank, Robert C. Brown & Co. and Citibank. In the fourth quarter, the fund placed almost $10 million in Dimensional Fund Advisors Inc.'s inflation-hedge and small-company stock mutual funds.

The fund's assets were $703 million on Sept. 30, of which 59% was in stocks, 34% fixed-income and 7% real estate equity.

Equity managers: Aetna Life & Casualty, Citicorp Investment Management, Manufacturers Hanover Trust and John Hancock Insurance Co.

Bond managers: John Hancock, Dimensional Fund Advisors, Hibernia National Bank, Citibank and Robert C. Brown.

Real estate managers: Aetna and John Hancock.

International managers: Morgan Grenfell and Citibank.

Aetna also manages its GICs and mortgages.

Martin Rodman is assistant comptroller-insurance; Louis Bornmann is systems accountant-insurance.

Ashland Oil Inc.

	($ millions)
Total assets	724 *
Pension	518
Profit-sharing	8
Thrift or savings	196
Employer contributions	na
Benefit payments	na

DIR32.GICs23.0%

*Estimate as of June 30, 1983

RUSSELL, Ky.— As of June 30, employee benefit assets at Ashland Oil totaled $724 million, *Pensions & Investment Age* estimates, using figures supplied by the 1984 Money Market Directory.

Equity managers: BMI Capital, Bankers Trust, Sanford C. Bernstein, Equitable Life, Forstmann-Leff Associates, Loomis, Sayles & Co. and Morgan Guaranty.

Bond managers: Bankers Trust, Hoisington Investment Management, Pacific Investment Management and in-house.

Real estate managers: Aetna Life & Casualty, Equitable Life and Prudential Insurance.

GICs: Aetna Life, Equitable Life, Metropolitan Life, New Eng-

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Chessie System Railroads

Seaboard System Railroad

Texas Gas Resources

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And with the Texas Gas

land Life and Pacific Mutual.

The investment management firms handling the thrift plan were Equitable Life and Chemical Bank.

The approximate asset mix was 42% stocks, 15% bonds, 13% cash equivalents, 7% real estate equity and 23% GICs. $50 million of the pension fund is managed in-house. Of that, $10 million is in equity, $30 million in fixed income and $10 million, short term.

The fund also has $118 million placed in GICs and $11.7 million invested overseas.

The funds use options and financial futures. There is a 401(k) plan and a corporate IRA program. Bankers Trust is master trustee.

Key investment personnel are John E. Stettler, assistant treasurer, and Kim H. Turkington, investment fund analyst.

Atlantic Richfield Co.

	($ millions)
Total assets	2,500
Pension	2,000
Profit-sharing	0
Thrift or savings	500
Employer contributions	120
Benefit payments	120

LOS ANGELES — For the Atlantic Richfield Co., pension assets increased more than 25% for the 12 months ending Sept. 30, while total employee benefit assets increased to $2.5 billion.

Atlantic Richfield manages $1.3 billion internally. Of that amount, $750 million is in equities, $390 million in fixed income and $130 million in short-term.

Equity managers: Jennison Associates Capital Corp., Bernstein-Macaulay, G.T. Capital, Fidelity International, Warburg Investment International, Rowe Price-Fleming International and Capital Guardian Trust.

Bond managers: Trust Co. of the West, Hoisington Investment Management, Fiduciary Trust, Morgan Guaranty and Salomon Asset Management.

Real estate managers: Aldrich Eastman & Waltch, Merrill Lynch Hubbard, Crocker National Bank and Lehndorff Associates.

Invested internationally is $180 million, $160 million of which is in equity and $20 million fixed. State Street Bank and Trust Co. is the master trustee.

SCHWARTZMAN

Key personnel in charge of employee benefit assets are H. Ockelmann, vice president-pension fund investment; D. W. Woolley, manager-equity investment; and P.L. Martin, bond portfolio manager.

b

Bakery and Confectionary Union & Industry

	($ millions)
Total assets	1,000
Pension	1,000
Profit-sharing	0
Thrift or savings	0
Employer contributions	137
Benefit payments	110

KENSINGTON, Md. — The Bakery and Confectionary Union & Industry's employee benefit assets totaled $1 billion as of Sept. 30. All of it was pension assets.

The mix was 36.6% stocks, 44.6% bonds, 10.7% cash equivalents, 5.5% GICs and 2.6% mortgages.

Of the 44.6% placed in bonds, 12.9% was in an immunized bond portfolio and 0.7% in convertible preferred bonds.

Balanced managers: Wertheim Asset Management, M.D. Sass Associates, Lazard Freres and Lionel D. Edie & Co.

Bond managers: Manufacturers Hanover Trust Co. and National Bank of Washington.

Real estate managers: National Bank of Washington.

GICs: Travelers, Crown Life, CNA Assurance and New York Life.

There was $85 million invested in dedicated bond futures and $45 million invested in GICs.

The National Bank of Washington was named master trustee this year, replacing First American Bank.

The fund doesn't use international investments, hedging devices, venture capital, or oil and gas investments.

The key person involved in overseeing the investment managment of the fund is John J. Fleming, administrative director.

Baltimore Retirement System

	($ millions)
Total assets	764
Pension	764
Profit-sharing	0
Thrift or savings	0
Employer contributions	26
Benefit payments	33

BALTIMORE — The Baltimore Retirement System in 1983 had $764 million in employee benefit assets as of Sept. 30, up 26% from the amount reported in 1982.

The asset mix for the pension assets as of that date was 50% stocks, 36% bonds, 12% cash equivalents, and 2% mortgages.

Equity managers: Delaware Investment Advisers, Pioneering Management Corp., State Street Research & Management Co., Oppenheimer Capital Co. and Fayez Sarofim & Co.

Bond managers: Mercantile Trust Co., Putnam Advisory Co., State Street Research & Management Co., Oppenheimer Capital Co. and Fayez Sarofim & Co.

Real estate managers: The Equitable Trust Co.

Key personnel in the organization include M.F. Leslie, administrator; Ernest J. Glinka, deputy administrator; and Thomas P. Taneyhill, accounting supervisor.

Batus Inc.

	($ millions)
Total assets	725
Pension	653
Profit-sharing	70
Thrift or savings	2
Employer contributions	50
Benefit payments	40

LOUISVILLE, Ky. — Employee benefit assets at Batus Inc. totaled $725 million as of Sept. 30, a 33% increase from 1982's figure of $44 million. Late in 1982, Batus added equity manager Investors Research and during 1983 dropped one of its equity managers, American National Bank.

Equity managers: Fred Alger Management, First Pacific Advisors, Hellman, Jordan Management, Investors Research, Lynch & Mayer, McKenzie, Walker Investment Management, and the RCB Special Equity Group Trust.

Bond managers: Jennison Associates and Lehman Management.

Real estate managers: Aldrich, Eastman & Waltch and TCW Realty.

GICs: Equitable.

As of Sept. 30, the approximate asset mix was 60% stocks, 15% bonds, 11.5 cash equivalents, 10% insurance annuities and 3.5% real estate equity.

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First Kentucky Trust is the master trustee.

T.C. Smith, director of benefit finance, oversees the investment management for the fund.

Bechtel Power Corp.

	($ millions)
Total assets	898
Pension	0
Profit-sharing	898
Thrift or savings	0
Employer contributions	na
Benefit payments	na

SAN FRANCISCO — The Bechtel Power Corp.'s combined profit-sharing and thrift or savings plans hold $898 million in assets as of Sept. 30, which is a 38% increase from 1982. The company would not disclose the amount of each plan nor its asset mix.

About $90 million is managed in-house, all of which is in fixed income.

Effective Jan. 1, the company added a 401(k) plan to its roster of employee benefits.

Bechtel has about $90 million in international investments, all of which is in equities managed by G.T. Capital Management, of San Francisco and Morgan Guaranty.

Equity managers: Batterymarch Financial Management, Chase Investment Management, Columbia Management, Glickenhaus & Co., Sit Investment Associates and Wells Fargo Investment Advisors.

Bond managers: Pacific Investment Management Co. and T. Rowe Price Associates.

Real estate managers: Aetna, Equitable, Prudential and First National Bank of Boston.

Master trustee is Well Fargo Bank.

Vincent Kuhn is manager of trust and thrift funds; Robert Enslow is investment manager.

Bethlehem Steel Corp.

	($ millions)
Total assets	2,352
Pension	2,352
Profit-sharing	0
Thrift or savings	0
Employer contributions	360
Benefit payments	500

BETHLEHEM, Pa. — Bethlehem Steel Corp. had $2.4 billion in assets as of Sept. 30. All of the assets are pension assets and all is managed internally.

The asset mix of the fund was 67% stocks, 23% bonds, 1% cash equivalents and 9% in receivables.

Walter W. Buckley Jr. is pension fund manager.

Boeing Co.

	($ millions)
Total assets	4,392 *
Pension	2,820
Profit-sharing	0
Thrift or savings	1,572
Employer contributions	140
Benefit payments	na

*As of June 1983

SEATTLE — In December, Boeing Co. started a farm team of 13 equity managers: Ashland Management, Avatar Associates, Cambiar Investors Inc., Waddell & Reed Inc., Janus Capital, Meridian Management Co., Olympic Capital Management, PRIMECAP Management, Roanoke Asset Management, Shaw Management, Trustee & Investors, Value Quest and Geewax, Terker.

Boeing's retirement assets totaled $4.392 billion in June 1983, according to the 1984 Money Market Directory. This was up from $3.2 billion in September 1982.

The Money Market Directory also provided a list of Boeing's managers as of June. The directory could not provide a breakdown of the types of management.

Management firms for Boeing's $2.82 billion retirement plan that were not listed last year are CIGNA Investment Advisory, First Chicago Investment Advisors, John Hancock Mutual Life Insurance Co., Frank Russell Co. and Nomura, a Japanese-equity manager. Bankers Trust is no longer listed.

The rest of the retirement plan investors are Robert C. Brown & Co., Capital Guardian Trust, Century Capital Associates, The Chase Manhattan Bank, Citibank, Crocker Investment Management, IDS Advisory Group, MacKay-Shields Financial, Manufacturers Hanover Investment, Morgan Guaranty Trust, Provident Capital Management, Prudential, Rosenberg Capital Management, Security Pacific Investment Managers, Security Pacific National Bank, Sit Investment Associates and TCW Asset Management.

Investors for the $1.45 billion voluntary investment savings plans are Aetna Life, Alliance Capital Management, Chase Investors, The First National Bank of Chicago, First Interstate Bank of Washington, IDS Advisory and Pringle, Flinn, Elvins & Donahoe.

Investors for the $1[illegible]2 million financial security plan are Chase Investors, Massachusetts Financial Services, Seattle-First National Bank and Sit.

Gary Bland is manager of trust investments.

Boilermakers, Blacksmiths National Pension Trust

	($ millions)
Total assets	1,344
Pension	1,344
Profit-sharing	0
Thrift or savings	0
Employer contributions	67
Benefit payments	48

KANSAS CITY, Kan. — Total assets of the Boilermakers, Blacksmiths National Pension Trust increased 25% to $1.344 billion as of Sept. 30. The union contributed $67 million to the fund in 1983. It paid out $48 million in benefits to retirees during the year.

Managers: Crocker Investment; Financial Counselors; Lehman Management; Loomis, Sayles & Co.; McMorgan & Co.; Neuberger & Berman; Prudential Insurance; Scudder, Stevens & Clark; and Trust Co. of the West.

The fund managed less than $10 million internally, all in short-term investments.

It had about $60 million in dedicated bond funds and about $104 million in GICs.

The approximate asset mix as of Sept. 30 was 40.8% stocks, 27.8% bonds, 10.7% cash equivalents, 8.7% real estate equity, 7.8% in GICs and 4.5% miscellaneous.

Brotherhood Bank & Trust is the master trustee.

Arthur E. Farr, chairman-investment committee, and T. Lusk Wands, administrator, oversee management of the funds.

C

California Public Employees Retirement System

	($ millions)
Total assets	20,438
Pension	20,438
Profit-sharing	0
Thrift or savings	0
Employer contributions	1,323
Benefit payments	1,058

SACRAMENTO, Calif. — The California Public Employees Retirement System hired Bankers Trust as an adviser to its modified index fund, estimated at $2 billion. It also hired Buck Consultants as the system's first consultant.

In addition, Edward T. Bradford, formerly fixed-income manager for the fund, was named acting chief of investments, replacing Sid McCausland, who was executive officer for the retirement system.

The Legislature and governor are locked in discussions over new salary proposals for in-house staff members of the retirement system, which manages $20 billion. Under state law, the in-house staff maintains final authority over the index fund.

Total assets for the retirement system increased from $13.5 billion in June of 1982 to more than $20

25 largest corporate funds
($ millions)

Rank	Fund	Assets
1.	American Telephone and Telegraph	61,218
2.	General Motors Corp.	19,500
3.	General Electric Co.	11,993
4.	International Business Machines	10,118
5.	Ford Motor Co.	8,900
6.	E.I. du Pont de Nemours & Co.	7,867
7.	U.S. Steel and Carnegie Pension Fund	7,310
8.	Exxon Corp.	6,586
9.	Sears,Roebuck & Co.	5,100
10.	GTE Service Corp.	4,800
11.	Eastman Kodak	4,728
12.	Boeing Co.	4,392
13.	Rockwell International	4,282
14.	United Technologies	4,200
15.	Shell Pension Trust & Provident Fund	3,907
16.	Lockheed Corp.	3,810
17.	McDonnell Douglas	3,723
18.	Westinghouse Electric	3,500
19.	Allied Corp.	3,200
20.	United Air Lines Inc.	3,170
21.	Mobil Oil Corp.	3,000
22.	Standard Oil Co. (Ind.)	2,985
23.	Standard Oil Co. of California	2,943
24.	Caterpillar Tractor Co.	2,750
25.	Hughes Aircraft Co.	2,724
	TOTAL	196,708

25 largest public funds
($ millions)

Rank	Fund	Assets
1.	New York State Common Retirement Fund	20,500
2.	California Public Employees Retirement System	20,438
3.	New York City Employees Retirement Systems	19,676
4.	New York State Teachers' Retirement System	11,300
5.	California State Teachers' Retirement System	10,500
6.	New Jersey Division of Investment	9,032
7.	Teacher Retirement System of Texas	8,612
8.	Michigan State Employees Retirement System	8,271
9.	Wisconsin Investment Board	7,900
10.	Ohio Teachers Retirement System	7,810
11.	Ohio Public Employees Retirement System	7,700
12.	North Carolina Retirement System	6,998
13.	Florida State Board of Administration	6,205
14.	Pennsylvania School Employees Retirement System	5,949
15.	Minnesota State Board of Investment	5,202
16.	Washington State Investment Board	5,000
17.	Georgia State Retirement Systems	4,214
18.	Pennsylvania State Employees	4,159
19.	Los Angeles County Employees	4,000
20.	Oregon Public Employees Retirement System	3,800
21.	Maryland State Retirement & Pension Systems	3,757
22.	Public Employees Retirement Association of Colorado	3,682
23.	Illinois Teachers Retirement System	3,600
24.	Alabama Retirement Systems	3,506
25.	Virginia Supplemental Retirement	3,275
	TOTAL	195,086

10 largest union funds
($ millions)

Rank	Fund	Assets
1.	Teamsters, Central States	4,886
2.	Teamsters, Western Conference	4,671
3.	United Mine Workers of America	2,523
4.	International Brotherhood of Electrical Workers	1,508
5.	Boilermakers, Blacksmiths National Pension Trust	1,344
6.	Bakery and Confectionary Union & Industry	1,000
7.	Operating Engineers, International Union of	944
8.	I.A.M. National Pension Fund	770
9.	Marine Engineers Benefit Association	756
10.	North California Retail Clerks	683
	TOTAL	19,085

Miscellaneous funds
($ millions)

Rank	Fund	Assets
1.	University of Calif. Employees	4,012
2.	United Nations Joint Staff	3,394
3.	United Methodist Pension Fund	1,467
4.	Tennessee Valley Authority	1,266
5.	Southern Baptist Convention	1,155
6.	World Bank	1,046
7.	National Rural Electrical Co-op	985
8.	United Presbyterian Pension Fund	892
9.	Episcopal Ministers Pension Fund	802
10.	American Bar Association	731
11.	Army & Air Force	703
	TOTAL	16,453

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billion in September of 1983.

Equity manager: Citicorp.

Real estate manager: F.I.A. Associates Inc.

Of its assets, $4.8 billion is in equity, $12.1 billion in fixed-income and $705 million in short-term. The remainder is in mortgages and other investments.

California State Teachers' Retirement System

	($ millions)
Total assets	10,500
Pension	10,500
Profit-sharing	0
Thrift or savings	0
Employer contributions	638
Benefit payments	919

SACRAMENTO, Calif. — The California State Teachers' Retirement System last July 1 placed its previously internally managed assets with two equity managers, Alliance Capital Management and Trust Co. of the West, and one fixed-income manager, Manufacturers Hanover Trust.

Early in 1983, it was thought the teachers' fund would have its own in-house staff.

Its assets had been managed for more than 12 years by the in-house staff of its sister fund, the California Public Employees' Retirement System.

However, the Legislature and governor couldn't agree on numerous matters, including appropriations for staff, and the teachers' system's only internal staff investment member, Mel Petersen, resigned.

The fund's assets remain with the external managers on a temporary basis. Richard W. Lambourne has been named interim chief of investments, and trustees of the system hired Wilshire Associates, Santa Monica, Calif., and Frank Russell, Tacoma, Wash., as consultants.

From June 30, 1982, to Sept. 30, 1983, pension assets for the retirement funds increased to $10.5 billion from $7.3 billion.

Equity managers: Alliance Capital Management and Trust Co. of the West.

Bond manager: Manufacturers Hanover Trust.

As of Sept. 30, the fund had 20% of assets in stocks, 43% in bonds, 31% in mortgages and 6% in cash equivalents.

The key person in charge of overseeing investments is Mr. Lambourne.

University of California

	($ millions)
Total assets	4,012
Pension	4,012
Profit-sharing	0
Thrift or savings	0
Employer contributions	260
Benefit payments	60

BERKELEY, Calif. — The University of California's pension assets of $4.012 billion are managed in-house.

As of year-end 1983, total employer contribution to all funds will be $260 million, while an estimated $60 million of benefits shall have been paid out to retirees.

The university has a 401(k) plan available to its employees as part of its benefits package.

The pension fund has about 2% of its assets in venture capital.

The approximate asset mix was 77% stocks, 22% bonds and 1% cash equivalents.

Bank of California in San Francisco is the custodian.

Overseeing investment of the funds are Herbert M. Gordon, treasurer of the regents of the university, and Patricia Small, associate treasurer.

Caterpillar Tractor Co.

	($ millions)
Total assets	2,750
Pension	2,400
Profit-sharing	350
Thrift or savings	0
Employer contributions	na
Benefit payments	na

PEORIA, Ill. — Caterpillar Tractor Co. made forays underground and overseas. The farm equipment maker participated in a $20 million oil and gas deal with other funds that was set up by Chase Investors. Caterpillar also hired Baring International Investment Ltd. and Fidelity International Investment Management Inc., both of Boston, to manage almost $45 million in overseas equities.

Caterpillar's pension assets increased to $2.75 billion on Sept. 30 from $2.02 billion a year earlier. The asset mix is 59% stocks, 23% bonds, 11% cash and 7% real estate equity.

The fund has no internally managed assets, passive investments or GICs.

Equity managers: Institutional Capital; Jennison Associates Capital; Morgan Guaranty Trust; Oppenheimer Capital; State Street Research Management; Thorndike, Doran, Paine & Lewis; and Equitable Life Assurance.

Bond managers: Fischer, Francis, Trees & Watts, Jennison Associates and Morgan Guaranty Trust.

Balanced managers: Chase Investors Management and Citibank.

Real estate managers: Aetna Life & Casualty, First National Bank of Chicago, LaSalle Street Fund, Travelers Insurance Co. and Equitable. The Northern Trust Co. is master trustee.

Caterpillar would not provide contribution and benefit levels, but its 1982 annual report put pension expense at $221 million.

The company offers a 401(k) plan.

Fred V. Dickinson is manager-risk management and employee benefit funds; Virginia A. Kane is benefit funds coordinator.

Celanese Corp.

	($ millions)
Total assets	900
Pension	700
Profit-sharing	0
Thrift or savings	200
Employer contributions	2
Benefit payments	32

NEW YORK — Employee benefit assets at Celanese increased 15% to $900 million as of Sept. 30, from 1982's $780 million. In an effort to further diversify its holdings, Celanese initiated a new "special investments" category — comprising venture capital and oil and gas — to its asset mix. The firm initally committed $10 million to that category, hoping to increase that eventually to 5% of its asset mix.

Equity managers: Fred Alger Management; BMI Capital; Hellman, Jordan Management; Bankers Trust; Neuberger & Berman Pension Management; Trustee & Investors Co.; Morgan Grenfell Investment Services; Yamaichi Capital Management; and Dimensional Fund Advisors.

Bond managers: Alliance Capital Management and Hoisington Investment Management.

Real estate managers: Chase Investors Management, InterFirst Bank Dallas and Prudential Insurance.

Options manager: Oppenheimer Option Management.

Oil and Gas: AmGO II.

Equity managers BMI and Trustee & Investors were added this year.

The approximate asset mix was 75% stocks, 6.5% bonds, 13% real estate equity and 5.5% GICs. Chase Manhattan is master trustee.

Key personnel are Charles S. Stephens, assistant controller, and Frances T. McCarthy, manager-benefits finance.

Chicago Policemen's Annuity and Benefit Fund

	($ millions)
Total assets	629
Pension	629
Profit-sharing	0
Thrift or savings	0
Employer contributions	53
Benefit payments	54

CHICAGO — Until Sept. 30, the fund was managed solely by Alliance Capital Management. Since then, the fund has split management among seven Chicago advisers. Alliance was retained, and shares equity management with Kemper Financial Services. American National Bank manages an index fund, and Capital Supervisors and The First National Bank of Chicago manage bonds. The policemen's board selected Penmark Investments Inc. and Lincoln Capital Management Co. as balanced managers. At the end of the third quarter, the $629 million fund was 12% stocks, 69% bonds, 16% cash and 3% mortgages.

Thomas Stack is fund comptroller and Robert Stritch is investment officer.

Chicago Teachers' Retirement Fund

	($ millions)
Total assets	1,465*
Pension	1,465
Profit-sharing	0
Thrift or savings	0
Employer contributions	96
Benefit payments	87

*As of Aug. 31, 1983

CHICAGO — The total employee benefit funds for the Public School Teachers' Pension & Retirement Fund of Chicago were $1.5 billion as of Aug. 31. This was an increase of 14% from the previous year. All of these assets are pension assets.

Balanced manager: Capital Supervisors.

The fund had an asset mix of 32% stocks, 61% bonds and 7% cash equivalents.

James F. Ward is the fund's executive director.

Chrysler Corp.

	($ millions)
Total assets	1,490
Pension	1,450
Profit-sharing	0
Thrift or savings	40
Employer contributions	270
Benefit payments	340

DETROIT — According to a *Pensions & Investment Age* survey, Chrysler has been running a $1.3 billion unfunded liability in its pension plan.

It made a $270 million payment against this in September, and said it would make a $500 million payment in 1984, which includes a $250 million "catch-up" payment.

Otherwise, the assets of the plan were up 17% during the 12-month period ending Sept. 30.

In 1983, the plan took on new equity managers Lynch & Mayer, Pacific Asset Management and E.F. Hutton Capital.

Equity managers: Alliance Capital; Avatar Associates; Chase Investors; Forstmann-Leff; E.F. Hutton Capital; Lynch & Mayer; Merrill Lynch Asset; Pacific Asset Management; Prudential Insurance; and Sanford C. Bernstein.

Bond managers: Crocker Investment; Manufacturers Hanover Trust; Morgan Guaranty; and National Bank of Detroit.

Real estate managers: Eastdil Advisors; JMB Institutional Realty; John Hancock; Morgan Guaranty; Prudential Insurance; and RREEF.

International managers: Chase Investors (some in domestic equity account); Morgan Guaranty (some in domestic fixed-income account).

The approximate asset mix was 46% stocks, 25% bonds, 15% cash equivalents, 13% real estate equity and 1% annuities.

Bankers Trust is the master trustee.

Key personnel are Frederick U. Zuckerman, vice president and treasurer; Russell P. Flynn, manager-pension fund administration; and Richard K. Alverson, manager-pension fund investments.

CIGNA Corp.

	($ millions)
Total assets	892
Pension	694
Profit-sharing	133
Thrift or savings	65
Employer contributions	46
Benefit payments	25

HARTFORD, Conn. — *Pensions & Investment Age* estimates employee benefit assets at CIGNA totaled $892 million as of Sept. 30. Of that, *P&I Age* estimates pension assets totaled $694 million.

All funds are under internal management by CIGNA Investment Management Co.

The approximate asset mix was 43% stocks, 49% bonds, 6% cash equivalents and 2% real estate equity.

The pension fund had $26 million invested in foreign markets. Of that, $10 million was in equity and $16 million was in fixed income. The fund also makes oil and gas investments.

John K. Armstrong, executive vice president and chief investment officer, oversees the investment management of the funds.

Citibank

	($ millions)
Total assets	1,078
Pension	924
Profit-sharing	154
Thrift or savings	0
Employer contributions	85
Benefit payments	38

NEW YORK — All of Citibank's pension and profit-sharing/thrift plan assets are managed by Citicorp Investment Management Division.

Citibank's employee benefit fund assets grew by 37% in the year ended Sept. 30.

Citibank has $65 million invested internationally, of which $49 million is in equities and $16 million in bonds. It offers employees both a 401(k) plan and a corporate IRA.

The asset mix is 55.3% equity, 22% bonds, 8.5% cash equivalents, 4.4% real estate equity and 3.8% mortgages.

Howard Laeir is the chairman of the staff benefits committee and retired vice chairman of Citicorp.

Public Employees Retirement Association of Colorado

	($ millions)
Total assets	3,632

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Pension	3,682
Profit sharing	0
Thrift or savings	0
Employer contributions	225
Benefit payments	170

DENVER — Assets of the Public Employees Retirement Association of Colorado rose more than 32% to $3.682 billion on Sept. 30, 1983, from $2.7 billion on Sept. 30, 1982.

The fund made news earlier this year when it was learned the Colorado fund was one of four public pension funds to help finance the mortgage of One Mellon Bank Center in Pittsburgh.

All of the assets of the system are managed internally. The asset mix on Sept. 30 was 46% stocks, 35.5% fixed income, 3.5% cash equivalents, 13% mortgages and 2% real estate equities.

Norman Jaskol is assistant secretary-finance.

Commonwealth Edison

	($ millions)
Total assets	1,153
Pension	1,153
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

CHICAGO — Commonwealth Edison Co.'s pension fund passed the $1 billion mark, rising 31.6% to $1.153 billion on Sept. 30, from $876 million in 1982.

The asset mix of the fund's traditional assets, which are managed in-house, is 52% stocks, 42% bonds and 6% cash equivalents.

The fund also invests in oil and gas through The Boston Co. The fund also holds $35 million in international securities: $33 million in equities and $2 million in fixed-income.

Robert F. Lindner is manager-investments and equities and Howard R. Carlson is fixed-income investments manager.

Look for the treasury microcomputer guide Feb. 6

Connecticut Retirement Systems

	($ millions)
Total assets	2,600
Pension	2,600
Profit-sharing	0
Thrift or savings	0
Employer contributions	320*
Benefit payments	248

*As of June 30

HARTFORD, Conn. — The $2.6 billion State of Connecticut Retirement Systems pension fund saw a 30% increase for the year ended Sept. 30, 1983, from 1982.

About $1.3 billion is managed in-house, with $822 million in fixed-income and $280 million in short-term investments or cash.

During 1983, the state system named three new bond managers: Lehman Management, Financial Management Group of Bear Stearns and Loomis, Sayles & Co. The latter is managing a $70 million bond portfolio.

In October, Terry A. Helming was named investment officer fixed-income, to succeed Maruti More who left in September.

About 2% of total assets are invested in GICs and roughly 8% of the total is in mortgages. Real estate equities account for about 5% of total assets.

Equity managers: Babson, Bernstein-Macauley, Capital Guardian, CIGNA, Connecticut Bank & Trust, Connecticut National Bank.

Bond managers: Financial Management Group (Bear Stearns), Lehman Management, Loomis Sayles and Scudder Stevens & Clark.

Real estate managers: Aetna, CIGNA, Phoenix Mutual and Travelers Insurance.

The approximate asset mix as of Sept. 30 was 33% stocks, 36% bonds, 16% cash equivalents, 5% real estate equity, 8% mortgages and 2% in GICs.

Key personnel overseeing investment of the funds are Frank P. McDermott, deputy treasurer-investments, and Terry A. Helming, investment officer-fixed-income.

Profile statistics at a glance

	1983 ($ billions)	1982 ($ billions)
Top 1,000 fund assets	306.1	622.6
Top 200 fund assets	605.6	469.3
Top 100 fund assets	503.5	386.4
Top 50 fund assets	397.5	306.7
Top 25 fund assets	299.7	230.5
Top 200 pension fund assets	544.1	419.8

Top 200 fund statistics

	1983 ($ billions)	1982 ($ billions)
Assets managed inhouse	265.1	161.2
Assets indexed	24.4	16.1
Assets invested in real estate	14.9	12.8
Assets invested in GICs	9.9	11.4
Assets invested overseas	6.8	3.8
Assets in dedicated bond portfolios	6.6	5.2

Top 200 fund alternative investments

	1983 No. of sponsors	1982 No. of sponsors
Indexed assets	45.0	39.0
GICs	77.0	70.0
Foreign investments	76.0	67.0
Real estate	113.0	105.0
Options	49.0	41.0
Financial futures	26.0	13.0
Venture capital	58.0	38.0
Oil and Gas	29.0	20.0

Conoco Inc.

	($ millions)
Total assets	1,445
Pension	760
Profit-sharing	0
Thrift or savings	685
Employer contributions	15
Benefit payments	70

STAMFORD, Conn. — Conoco's thrift plan and pension fund was not merged into the Du Pont plans, and has retained its autonomy.

Last February, Conoco named six new specialty equity firms, and funded them with cash from existing managers. They were Hambrecht & Quist; GAMCO Investors; BMI Capital; Hellman, Jordan; Leylegian; and McKenzie, Walker.

The funds grew by 12% during the 12 months.

Equity managers: BMI Capital; Batterymarch Financial; Fred Alger; GAMCO; Hambrecht & Quist; Hellman, Jordan; Leylegian Management; McKenzie, Walker; InterFirst Bank; Morgan Guaranty; and Value Line Asset Management.

Bond managers: Fischer, Francis, Trees & Watts; Morgan Guaranty; and Bankers Trust.

Real estate managers: InterFirst Bank; Travelers Insurance; John Hancock; and Morgan Guaranty.

Venture capital: Excelsior; Warburg, Pincus; Sequoia Fund; Pathfinder Fund; Hambrecht & Quist.

International manager: Morgan Guaranty.

The approximate asset mix was 70% stocks, 9% bonds, 1% cash equivalents, 9% real estate equity, 9% GICs and 2% in venture capital.

U.S. Trust is the master trustee.

Key personnel are R.F. Hartman Jr., manager of pensions investments; W.H. Smith, coordinator of pension investments; and L.D. Jones, coordinator of pension investments.

Consolidated Edison

	($ millions)
Total assets	1,261
Pension	1,261
Profit-sharing	0
Thrift or savings	0
Employer contributions	75
Benefit payments	65

NEW YORK — Consolidated Edison's total assets increased 34.3% to $1.261 billion as of Sept. 30. The company contributed $75 million to the pension fund and paid out $65 million in benefits to retirees.

Equity managers: Batterymarch Financial Management; Favia, Hill Investment Management (Chemical Bank); and Dreyfus Investment Management.

Balanced managers: Morgan Guaranty, Citibank and FMR Investment Management Services.

Bond managers: State Street Research & Management and Harris Trust & Savings.

Real estate managers: JMB Institutional Realty Corp.

GICs: Aetna Life Insurance Co.; Metropolitan Life's general account.

The approximate asset mix was 52% stocks, 35% bonds, 7% cash equivalents, 6% real estate equity.

Con Edison had $252 million, 20% of its assets, invested in GICs.

The fund invested less than 3% or $37 million of its pension assets in foreign markets, of which $25 million was equities and less than $12.6 million was fixed-income.

The pension fund uses oil and gas as an alternative investment.

The master trustee is Chase Manhattan Bank.

John V. Thornton, senior executive vice president-finance, and John N. Bell, assistant treasurer, oversee investments.

Continental Group Inc.

	($ millions)
Total assets	1,075
Pension	948
Profit-sharing	0
Thrift or savings	127
Employer contributions	na
Benefit payments	na

STAMFORD, Conn. — Continental Group Inc. had a 34% increase in its assets as of Sept. 30, bringing its total assets to $1.075 billion. Of this, $948 million was pension assets and $127 million was thrift or savings plan assets.

Equity managers: Lord Abbett & Co., Continental Financial Services, Jennison Associates and Vilas-Fischer.

Balanced managers: Alliance Capital and IDS Advisory.

Bond manager: Continental Financial Services.

Real estate managers: Equitable Life Assurance Co. and John Hancock Insurance Co.

International managers: Grenfell Investment Services Ltd. and Trust Co. of the West Asset Management.

Venture capital manager: Welsh, Carson, Anderson & Stowe.

Continental Group manages $8 million of its equity assets in-house.

The asset mix of the fund is 50.7% stocks, 18.5% bonds, 9.1% cash equivalents, 13.7% real estate equity and 8% in convertibles.

Continental Group offers a 401(k) program.

Walter R. Good is vice president-pension asset management.

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Dart & Kraft Inc.

	($ millions)
Total assets	1,326
Pension	1,047
Profit-sharing	184
Thrift or savings	95
Employer contributions	33
Benefit payments	50

GLENVIEW, Ill. — The market value of employee benefit assets were $1.3 billion on Sept. 30. This is an increase of $242 million from the assets reported after the merger last year of Dart and Kraft.

Equity managers: Putnam; Batterymarch; Ruane, Cunniff & Co; Weiss, Peck & Greer; IDS Advisory; L.F. Rothschild; Neuberger & Berman; Thorndike, Doran, Paine & Lewis; BEA Associates; Atalanta Capital; and Vanguard Investment Cos.

Bond managers: Fischer, Francis, Trees & Watts and Bankers Trust. Other managers include John Hancock Mutual Life and New England Mutual Life.

Pension assets in dedicated bond funds amounted to $65 million, and the amount invested overseas was $5 million.

The asset mix of the fund was 60% stocks, 13% bonds, 5% cash equivalents and 22% immediate participation guaranteed contracts.

Bankers Trust Co. is the pension fund's master trustee. The firm offers its employees a 401(k) plan

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and a corporate IRA program.

Key personnel in the organization include William H.S. Preece Jr., director-pension finance.

Deere & Co.

	($ millions)
Total assets	1,531
Pension	1,531
Profit-sharing	0
Thrift or savings	0
Employer contributions	108
Benefit payments	112

MOLINE, Ill. — Deere & Co.'s pension assets stood at $1.5 billion as of Sept. 30, an increase of 27% from the 1982 total of $1.2 billion.

Deere's pension fund holds about 6,900 shares of its own company stock in a large-capitalization equity account. That is because the fund buys stocks systematically from the 200 largest corporations.

There are $964 million under management in-house. About $757 million is in equities, $179 million in bonds, and $28 million in short-term investments.

About $849 million of Deere's equities are indexed.

About $17 million was invested in foreign markets as of Sept. 30, all in equities. That represents a decrease of about $2 million from 1982's total international investments of $20 million.

During the past year, Deere added a 401(k) plan to its employee benefits.

Equity managers: Alliance Capital, Batterymarch Financial, Morgan Guaranty and Wright Investors.

Bond managers: Brown Brothers and Morgan Guaranty.

Real estate manager: Morgan Guaranty.

The approximate asset mix was 76% stocks, 20% bonds, 3% cash equivalents and 1% real estate equity.

Boston Safe Deposit & Trust Co. is the master trustee.

Greta E. Marshall, director-investments announced her resignation in January 1934. Carl Liebscher is assistant director-investments, and Barron Curtis is portfolio manager.

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Delaware State

	($ millions)
Total assets	661
Pension	661
Profit-sharing	0
Thrift or savings	0
Employer contributions	64
Benefit payments	34

DOVER, Del.— Delaware State employee benefit assets climbed to $661.2 million as of Sept. 30.

Equity managers: T. Rowe Price; Harris, Bretall & McEldowney; Lincoln Capital Management; Provident Investment Counsel; and Trinity Investment Management.

Bond managers: Atlanta Capital Management and Forstmann-Leff-Degnan.

Real estate managers: Aetna Life, John Hancock and Citibank.

Other managers: Wells Fargo Bank; Morgan Holand Fund, L.P.; State Street Bank; Arscott Norton; Fred Adler Co.; Brentwood Associates; Fidelity Money Market Trust; and Scudder Cash Investment Trust.

The approximate asset mix was 42.6% stocks, 16.2% bonds, 12.6% cash equivalents, 5.9% mortgages, 15.3% GICs, 6.5% pooled real estate, and 0.9% venture capital.

Mercantile Safe-Deposit & Trust Co. is the master trustee.

Key investment personnel are Theodore Ashford, investment adviser and secretary, investment committee; Bruce O. Kallos, chairman, investment committee; and Ernst Dannemann, chairman, board of pension trustees.

Delta Air Lines Inc.

	($ millions)
Total assets	1,650
Pension	1,500
Profit-sharing	0
Thrift or savings	150
Employer contributions	na
Benefit payments	na

ATLANTA — Delta Air Lines' total employee benefit assets increased 37.5% in the year ended Sept. 30. During the period, its thrift or savings plan assets swelled 50%.

Pensions & Investment Age estimates Delta has $16.5 million, or approximately 1% of total assets, invested internationally, all of it in equities. The company also makes limited use of GICs.

Delta declined to reveal further information.

The approximate asset mix was 60% stocks, 25% bonds and 15% cash equivalents.

Harris Trust is the master trustee.

James B. Taylor, manager-investment management, oversees fund investments.

Detroit Retirement Systems

	($ millions)
Total assets	1,917*
Pension	1,917
Profit-sharing	0
Thrift or savings	0
Employer contributions	159
Benefit payments	135

*As of June 30, 1983

DETROIT — The Detroit Retirement Systems' fund comprises the Policemen and Firemen Retirement System and the General Retirement System.

Assets of the police and fire system are $900 million; assets for the general system are $1.017 billion. Both figures are for the year ending June 30.

The police and fire retirement system has an asset mix of 25% in stocks, 29% in bonds, 13% in cash equivalents, 22% in mortgages, 1% in real estate equities and 10% in GICs.

The general retirement system has an asset mix of 21% in stocks, 32% in bonds, 14% in cash equivalents, 16% in mortgages, 1% in real estate equity and 16% in GICs.

Only the policemen and firemen's retirement system has international investments, with $1.6 billion in the fixed-income area.

Fred Murphy is executive secretary for both funds.

Dow Chemical Co.

	($ millions)
Total assets	1,400
Pension	1,300
Profit-sharing	100
Thrift or savings	0
Employer contributions	110
Benefit payments	95

MIDLAND, Mich. — Dow Chemical's pension assets increased 26.7% during the year ended Sept. 30.

The firm added Alliance Capital to its roster of equity managers in 1983.

Since 1973, when it began an in-house management program, the fund has been a regular purchaser of company stock.

The fund has $35 million of its internally managed assets invested in real estate.

Equity managers: Alliance Capital; Stein, Roe & Farnham; Morgan Guaranty; National Bank of Detroit; D.L. Babson; AmeriTrust; and internal management.

Bond managers: Morgan Guaranty and internal management.

Real estate managers: Internal and Coldwell Banker.

The approximate asset mix was 62% stocks, 25% bonds, 10% cash equivalents and 3% real estate equity.

National Bank of Detroit is the master trustee.

Funds with equity real estate investments (millions)

Fund	Assets	Fund	Assets
AT&T	2,7[illegible]	General Foods	56
Ohio State Teachers	1,125	MEBA	56
IBM	809	Pacific Gas & Electric	55
Exxon	515	Honeywell	51
Western Teamsters	505	World Bank	49
General Motors	466	Army and Air Force Ex.	49
General Electric	391	R.J. Reynolds	49
Westinghouse	365	Teamsters, Central	49
Prudential	348	Grumman	49
Ore. Public Employees	304	Aetna Life	47
U.N. Joint Staff	238	3M	43
Shell	230	Citibank	41
Allied Corp.	208	Los Angeles Employees	40
Chrysler	189	Dow Chemical	39
Nev. Public Employees	180	Reynolds Metals	39
United Technologies	179	Travelers Corp.	39
Standard Oil of Calif.	176	Union Oil of Calif.	39
Caterpillar Tractor	168	Abbott Laboratories	38
Armco	164	Merck & Co.	38
Virginia Supplemental	164	Southern Baptist	37
Sun Co.	156	Ashland Oil	36
Ohio Public Employees	154	Ak. Public Employees	33
RCA Corp.	152	North American Philips	31
Goodyear Tire & Rubber	143	Rohm and Haas	31
Ohio School Employees	143	American Can	30
Eastman Kodak	140	I.A.M.	30
Intl. Harvester	140	Penn. Public School	30
IBEW	133	Phillips Petroleum	30
State of Conn.	130	Penn. State Employees	29
Continental Group	130	Alaska Teachers	28
Hughes Aircraft	127	New York Life	27
Monsanto	126	Eli Lilly	26
United Airlines	125	Tenn. Valley Authority	26
Boilermakers	117	Texas Instruments	25
Illinois State	107	Xerox	25
United Methodist	106	Dresser Industries	24
Minnesota State	104	So. New England Phone	24
Utah State	100	BATUS	23
United Mine Workers	96	Republic Steel	19
Alcoa	95	Trans World Airlines	18
Owens-Illinois	94	Mich. State Employees	17
San Fran. City & County	94	Philip Morris	17
Celanese	91	Deere & Co.	15
Standard Oil (Ind.)	87	CIGNA	14
National Steel	85	Manville	14
Hercules	80	Kentucky Teachers	13
Con Edison	76	Warner-Lambert	12
Washington State	75	Detroit General System	10
Union Carbide	72	Signal Cos.	10
J.C. Penney	71	Detroit Police & Firemen	9
John Hancock	70	Southern Co.	9
Conoco	68	Episcopal Church	8
Sandia National Labs	68	Florida Power and Light	8
International Paper	64	Greyhound	8
ITT	61	Textron	8
Inland Steel	60	Southern Calif. Edison	7
Raytheon	60	American Electric Power	6
Standard Oil (Ohio)	58	TOTAL	14,936

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E.C. Yehle, director-pension investments; W.J. Burroughs, manager-pension investments; and B.H. Brooks and R.C. Cross, portfolio managers, are key officers overseeing investment management of the fund.

Dresser Industries

	($ millions)
Total assets	800
Pension	800
Profit-sharing	0
Thrift or savings	0
Employer contributions	50
Benefit payments	33

DALLAS — Dresser Industries' employee benefit assets totaled $800 million as of Sept. 30, up almost 42% from 1982's asset total.

As of that date, the approximate allocation of assets was 33% stocks, 31% GICs, 30% cash equivalents, 3% real estate equity and 2% bonds.

Equity managers: David L. Babson, Delaware Investment Advisers, Endowment Management & Research, Equitable Life Assurance, Aetna and Mellon Bank.

Bond managers: Equitable Life Assurance, Morgan Guaranty, Aetna and U.S. Trust.

Real estate equity manager: Equitable.

Dresser has $255 million invested in GICs, which it places itself. Contract holders are Canada Life, Mutual Benefit Life, New York Life, Travelers Insurance, Metropolitan Life, John Hancock Mutual Life and Pacific Mutual Life.

No assets are invested in foreign markets, hedging devices or alternative investments.

Northern Trust is the master trustee.

E.R. Luter is chairman of the investment committee.

E.I. du Pont de Nemours & Co.

	($ millions)
Total assets	7,867
Pension	6,685
Profit-sharing	0
Thrift or savings	1,182
Employer contributions	483
Benefit payments	369

WILMINGTON, Del. — Employee benefit assets at Du Pont rose 28% to $7.867 billion for the 12 months ending Sept. 30.

The $6.7 billion in pension assets is internally managed.

There are outside managers for the $1.2 billion thrift plan.

Equity manager: Bankers Trust.

Bond manager: Equitable Life.

Wilmington Trust manages government bonds and Du Pont stock.

Du Pont had $277 million in international equities and $133 million in foreign bonds as of Sept. 30. It also uses options and financial futures.

The asset mix for the pension fund, as of Sept. 30, was 61% stocks, 35% bonds, and 4% cash equivalents.

Wilmington Trust is master trustee for the pension trust.

David F. Marvin is vice president-pension fund investment department. Overseeing the thrift plan is A.H. Nehrling Jr., assistant treasurer/director-employee compensation and benefits division-finance department.

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Eastern Air Lines

	($ millions)
Total assets	1,400
Pension	1,400
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

MIAMI — Eastern Air Lines Inc. was unable to make its 1983 pension fund contribution. On Dec. 13, the troubled airline applied to the IRS to defer the contribution to the $800 million defined benefit pension plan for employee service rendered in 1982.

The company applied to the IRS to waive the final payment until 1986. The IRS already granted Eastern an extension until Dec. 15 for the $37.5 million contribution due Sept. 15. Eastern sought the first extension after canceling its plan to place a mixture of company stock and cash in the pension fund.

Eastern's employee benefit assets totaled $1.4 billion on Sept. 30. This consists of an $800 million fixed benefit retirement plan and a $600 million pilots' variable benefit retirement plan.

Managers (for the fixed benefit plan): INVESCO Capital Management; Delaware Investment Advisers; Fort Hill Investors Management Corp.; Abel/Noser Corp.;

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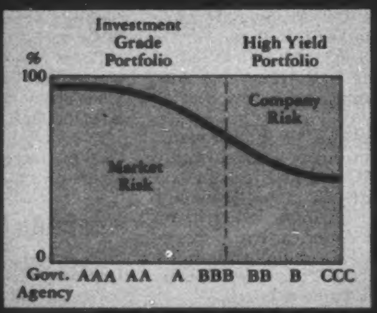

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Forstmann-Leff Associates; Equitable Life Assurance; Northwestern Union Trust Co.; Prudential Insurance; and Rollert & Sullivan.

During 1983, the pilots' plan added Waite & Correnti, Los Angeles, to manage an equity portfolio.

Managers (for the pilots' plan): Waite & Correnti; Campbell Advisors; Capital Guardian Trust; Crocker National Bank; Kennedy Associates; National Investment Services of America; North Carolina National Bank; Rollert & Sullivan, Southland Trust; and Thorndike, Doran, Paine & Lewis.

The approximate asset mix for both plans was 50% stocks and 50% bonds as of Sept. 30.

The company manages less than 10% or $140 million of these assets internally in fixed-income securities.

Eastern had no assets invested in foreign markets as of Sept. 30. A year ago it had less than 1% of its assets in international equities. The company uses oil and gas for alternative investments, and reports investing less than 10% of its assets in this area.

Chase Manhattan Bank is master trustee for the fixed benefit plan. State Street Bank & Trust, Boston, is custodian for the pilots' plan.

Robert Wallace, director-pension asset management, oversees investments.

Eastman Kodak

	($ millions)
Total assets	4,728
Pension	4,028
Profit-sharing	700
Thrift or savings	0
Employer contributions	na
Benefit payments	na

ROCHESTER, N.Y. — Eastman Kodak's employee benefit assets totaled $4.2 billion as of Dec. 31, 1982. This was a 13.5% increase from the $3.7 billion total estimated a year ago. *Pensions & Investment Age* estimates the total had grown to $4.728 billion by Sept. 30, 1983.

Kodak added one new equity manager during the year, Fidelity Management Trust Co., Boston.

Equity managers: American National Bank of Chicago; Batterymarch Financial; Eberstadt Asset Management; Kemper Financial Services; Morgan Guaranty Trust; Neuberger & Berman Pension Management Inc.; Rogers, Casey & Barksdale's group trust; State Street Research & Management; T. Rowe Price Associates; Fidelity Management Trust; and Value Line Asset Management.

Real estate managers: Aetna Life & Casualty; Equitable Life Assurance; Prudential; and RREEF.

GICs or annuities: Metropolitan Life and Equitable.

For the second year in a row, Eastman Kodak did not have any bond investments for its pension fund. It has indexed assets but the amount was not provided.

Eastman Kodak also has investments in international markets and uses Morgan Guaranty's commingled funds.

The approximate asset mix as of Dec. 31, 1982, was 55% stocks, 7% cash equivalents, 4% real estate equity and 34% annuities.

Boston Safe-Deposit & Trust serves as master trustee.

The company offers a corporate IRA program.

Donald E. Snyder, treasurer, Russell L. Olson, director-pension investments, and A. Duff Lewis, financial analyst-pension investments, oversee management of the funds.

Eaton Corp.

	($ millions)
Total assets	800
Pension	700
Profit-sharing	0
Thrift or savings	100
Employer contributions	na
Benefit payments	na

CLEVELAND — As of Sept. 30, employee benefit assets at Eaton Corp. totaled $800 million, a 39% jump from last year's total of $575 million.

Equity managers: E.W. Axe; Fidelity Frontier; Stein, Roe, & Farnham; Putnam Advisory; Thorndike, Doran, Paine & Lewis; Weiss Peck & Greer; Oppenheimer Capital; Century Capital; and in-house.

Bond manager: Thorndike, Doran, Paine & Lewis.

Real estate manager: MacKay-Shields.

The approximate asset mix was 70% stocks, 15% bonds and 15% cash equivalents.

In-house managed assets totaled $70 million, all equity. The fund also has $20 million in dedicated bond funds and $10 million invested in GICs. The fund also makes venture capital investments.

Mellon Bank is the master trustee.

Richard Gabel, manager-pension fund investments, oversees the investment management of the fund.

International Brotherhood of Electrical Workers

	($ millions)
Total assets	1,508
Pension	1,508
Profit-sharing	0
Thrift or savings	0
Employer contributions	150
Benefit payments	78

WASHINGTON — The internally managed employee benefit fund increased 17.6% to $1.5 billion in the 12-month period ending Sept. 30, up from $1.3 billion.

The fund provides benefits for workers employed by members of the National Electrical Contractors Association. Most workers belong to the International Brotherhood of Electrical Workers.

As of Sept. 30, the asset mix was 48% mortgages, 16.9% cash equivalents, 14.6% bonds, 6.8% stocks, 8.8% real estate equity and 4.9% miscellaneous.

Mike Nugent and Ray Love of the IBEW oversee management of the fund.

The Episcopal Ministers' Church Pension Fund

	($ millions)
Total assets	802
Pension	802
Profit-sharing	0
Thrift or savings	0
Employer contributions	44
Benefit payments	23

NEW YORK — The Episcopal Church's employee benefit assets totaled $802 million as of Sept. 30, up 34% from 1982's $600 million.

Equity managers: Morgan Guaranty and Alliance Capital Management.

Bond manager: Morgan Guaranty.

Real estate manager: Morgan Guaranty.

The approximate asset mix was 61% stocks, 30% bonds, 8% cash equivalents and 1% real estate equity.

The Church Pension Fund Inc. is the master trustee.

Key investment personnel are Robert A. Robinson, president and Walter Donnelly, executive vice president.

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CORE Industries

Exxon Corp.

	($ millions)
Total assets	6,588
Pension	4,554
Profit-sharing	0
Thrift or savings	2,034
Employer contributions	271
Benefit payments	252

*As of June 30, 1983

NEW YORK — Exxon Corp. moved its master trust from Chase Manhattan Bank to Irving Trust Co. during 1983. The change involved approximately $3 billion in pension assets. Chase was appointed master trustee in 1982.

Also, Exxon contributed $54 million in Texas real estate to its pension fund in lieu of 12% of its 1982 cash contribution, reportedly at the pension fund's request.

In other news during 1983, Exxon's pension fund committed several million dollars to Bridge Capital Investors, and Vincent J. Motto, assistant treasurer since 1963, retired. C.W. Williams, manager trust investments, who oversees internally managed assets, was named assistant treasurer.

Total fund assets increased 19.56% to $6.588 billion as of June 30.

Exxon manages $2.364 billion internally, with $1.979 billion in equities, $192.3 million in fixed-income securities and $192.3 million in short-term instruments. About $132 million is invested in foreign equity markets.

Equity managers: Citibank, First City National Bank of Houston, Wells Fargo Investment Advisors, Morgan Grenfell Investment Services and State Street Bank & Trust.

Bond managers: Scudder Stevens & Clark and State Street Research & Management Co.

Real estate managers: Aetna Life & Casualty Co., Corporate Property Investors, Equitable Life Assurance, InterFirst Bank Dallas and Prudential.

Insured reserves: Aetna, Equitable, John Hancock Mutual Life, Prudential Insurance and the Travelers.

International managers: Morgan Grenfell Investment Services and State Street Bank.

Exxon has $933.4 million invested in indexed assets.

The company uses options to hedge investments. It also invests in venture capital and oil and gas. The approximate asset mix was 60.3% stocks, 8.7% bonds, 4.2% cash equivalents, 11.3% real estate equity, with insured reserves comprising 14.3% and oil and gas royalties, 1.2%.

The company has a 401(k) plan and a corporate IRA program.

The key personnel in investment management are Mr. Williams and T.M. Castagna, manager-corporate funds and plans financing.

f

The Firestone Tire & Rubber Co.

	($ millions)
Total assets	1,000
Pension	1,000
Profit-sharing	0
Thrift or savings	0
Employer contributions	0
Benefit payments	120

AKRON, Ohio — The Firestone Tire & Rubber Co.'s pension assets grew by 10.1% to reach the $1 billion mark. The firm made no contributions to the fund while paying out $120 million in benefits.

An Internal Revenue study of 1980 pension assets released in 1983 reported that based on an interest rate assumption of 13%, Firestone's $517.9 million in assets would have made the plan overfunded by $215.1 million.

The overfunding amount was second only to that in State Farm Life Insurance Co.'s fund. A *P&I Age* study looking at the potential impact of the FASB's proposal to record pension liabilities on corporate balance sheets found that Firestone's pension plan surplus as a percentage of net sales was 30.9%, this time second only to that of Lockheed.

Firestone's fund is managed internally.

Dedicated bond funds hold $520 million of the plan, just more than half.

Options and venture capital are used by the fund.

The approximate asset mix was 40% stocks and 60% bonds.

Manufacturers Hanover Trust is the master trustee.

Overseeing the fund are James D. Oelschlager, assistant treasurer; James R. Raith, portfolio manager; and James H. Behrmann, portfolio manager.

Florida Power & Light

	($ millions)
Total assets	760
Pension	563
Profit-sharing	0
Thrift or savings	197
Employer contributions	42
Benefit payments	7

MIAMI — Florida Power & Light Co. had $760 million in assets as of Sept. 30: $563 million in pension assets and $197 million in thrift or saving plan assets.

Equity managers: Wells Fargo, Morgan Guaranty, Fayez Sarofim, Batterymarch, Lynch & Mayer and Roanoke Asset Management.

Bond manager: Harris Trust.

Real estate manager: JMB Institutional Realty Corp.

GICs: Metropolitan Life.

Florida Power has $27.7 million invested in foreign markets.

The asset mix of the pension assets as of Sept. 30 was 65.3% stocks, 19.9% bonds, 13.4% cash equivalents and 1.4% real estate equity.

Master trustee for the fund is Wachovia Bank & Trust.

J.L. Howard is vice president-treasurer of the firm.

Florida State Board of Administration

	($ millions)
Total assets	6,205
Pension	6,205
Profit-sharing	0
Thrift or savings	0
Employer contributions	709
Benefit payments	324

TALLAHASSEE, Fla. — A new state law enabled the Florida State Board of Administration to hire its first outside managers, and the fund is now looking to take on equity managers.

In late September, it hired Bankers Trust Co. to set up an index fund based on the Standard & Poor's 500.

The fund also made its first real estate equity commitments, but withdrew them before they were funded. A policy change will cause the fund to first invest in commingled accounts, according to Jay Yelton, executive director. The disappointed managers are LaSalle Partners, Equitable Life and First Capital Financial Corp., who each were to run $100 million in separate accounts.

The $6.2 billion fund also hired three managers for option overwriting on $300 million in equities: Travelers Investment Management, Bear Stearns & Co., and Balch, Hardy & Scheinman.

However, all of the assets were managed internally as of Sept. 30.

At that time, the fund's asset mix was 40.9% stocks, 52.9% bonds, and 6.2% cash equivalents.

Citibank was hired as master trustee around the end of June.

In addition to Mr. Yelton, other key personnel are Jon Goebel, equities portfolio manager; David Kroon, bond portfolio manager; Carmen Hiers, short-term portfolio manager; and Doug Bennett, real estate portfolio manager.

FMC Corp.

	($ millions)
Total assets	1,035
Pension	871
Profit-sharing	0
Thrift or savings	164
Employer contributions	40
Benefit payments	30

CHICAGO — Employee benefit assets at FMC totaled $935 million as of Sept. 30, 24.2% more than 1982's $753 million.

Equity managers: Ruane, Cunniff; Thorndike/Wellington Trust Management; Beacon Financial; Templeton Investment Counsel; Batterymarch Financial Management; and Tweedy, Browne Inc.

Bond managers: Metropolitan Life and Equitable Life.

The approximate asset mix was 70% stocks, 25% bonds and 5% GICs.

In-house managed assets were $115.5 million.

Of that, equity claimed $100 million and the remainder was fixed income.

The fund has $49 million in GICs. Foreign investments accounted for $19 million, all in equity. The fund uses venture capital.

Bankers Trust is the master trustee.

Key personnel are R.B. Hoffman, vice president-finance; B.R. van Eck, vice president, treasurer and secretary; and W.H. Schumann, director of investments.

Ford Motor Co.

	($ millions)
Total assets	8,900
Pension	7,900
Profit-sharing	0
Thrift or savings	1,000
Employer contributions	550
Benefit payments	600

DEARBORN, Mich. — Ford Motor Co. added two investment firms near the end of 1983 to manage equities for its master pension trust: Hathaway Associates and Rollert & Sullivan.

Ford also added New England Life Insurance Co. to manage equities for its thrift plan.

As of Sept. 30, total employee benefit assets increased 34.6%, to $8.9 billion. Thrift and savings plan assets increased 74.5% from $575 million in 1982 to $1 billion by Sept. 30.

Managers (for the pension fund): Alliance Capital Management; Brown Brothers Harriman; Capital Guardian Trust; Chase Manhattan; Citibank; First National Bank of Boston; Fiduciary Management Trust; Harris Trust & Savings; Manufacturers National Bank of Detroit; Morgan Guaranty Trust; National Bank of Detroit; T. Rowe Price; RepublicBank Dallas; Sarofim Trust Co.; State Street Research & Management; and Wells Fargo.

Managers (for the savings plan): Aetna Life; Capital Guardian Trust; John Hancock; Manufacturers National of Detroit; T. Rowe Price; Fayez Sarofim; and Travelers.

The fund invested $1.3 billion of its pension assets in stock index funds.

It invested $300 million in dedicated bond funds. The company had $150 million invested in foreign markets, of which $120 million was in stocks.

The pension fund uses options and financial futures as hedging devices.

The fund also uses venture capital and oil and gas.

The approximate asset mix was 65% stocks and 35% bonds as of Sept. 30.

The master trustee is Manufacturers National Bank of Detroit.

Ford sponsors a 401(k) plan.

Robert C. White is the assistant treasurer; M.E. Maertens is the manager-trust investment.

Top 200 pension fund investments in the international equity, fixed-income markets

($ millions)

Fund	Total	Equity	Fixed
United Nations Joint Staff Pension Fund	1,316	na	na
International Business Machines	978	978	0
E.I. du Pont de Nemours & Co.	410	277	133
Mobil Oil Corp.	300	200	100
United Air Lines Inc.	255	255	0
World Bank Staff Retirement Plan	245	245	0.0
American Telephone and Telegraph	200	na	na
United Technologies	200	200	0
Atlantic Richfield Co.	180	160	20
Ford Motor Co.	150	120	30
Sun Co.	134	na	na
Exxon Corp.	132	132	0
Xerox Corp.	103	97	6
American Airlines	100	82	18
General Electric Co.	95	51	44
Allied Corp.	90	90	0
Bechtel Power Corp.	90	90	0
Owens-Illinois Inc.	85	71	14
Prudential Insurance	83	77	6
TRW Inc.	82	na	na
Standard Oil Co. (Ind.)	76	74	2
Citibank	65	49	16
National Rural Electric Cooperative	64	62	2
Hawaii Employees' Retirement System	63	63	0
Sears,Roebuck & Co.	54	54	0
Litton Industries Inc.	51	na	na
Monsanto Co.	50	50	0
Continental Group Inc.	47	47	0
Minnesota Mining and Manufacturing Co.	47	47	0.0
Goodyear Tire & Rubber	45	45	0
RCA Corp.	45	45	0
Caterpillar Tractor Co.	44	44	0
Los Angeles City Fire & Police	42	7	35
Hughes Aircraft Co.	40	40	0
Marine Engineers Benefit Association	40	40	0
Celanese Corp.	38	38	0
Hercules Inc.	38	35	3
Consolidated Edison	38	25	13
Manville Corp.	37	32	5
Travelers Corp.	37	37	0
Republic Steel Corp.	36	9	27
Commonwealth Edison Co.	35	33	2
Merck & Co.	33	33	0
Dow Chemical Co.	30	30	0
ITT	30	30	0
Standard Oil Co. (Ohio)	30	30	0
Warner-Lambert Co.	30	30	0
Inland Steel	28	28	0
United Presbyterian Church	28	na	na
Florida Power & Light	28	28	0
American Can Co.	26	21	5
CIGNA Corp.	26	10	16
Aetna Life & Casualty	25	25	0
Alaska State Retirement System	20	20	0
FMC Corp.	19	19	0
Deere & Co.	17	17	0
Illinois State Universities	17	17	0
Trans World Airlines	17	17	0
Delta Air Lines Inc.	17	17	0.0
Conoco Inc.	14	14	0
International Paper Co.	13	13	0
The Southern Co. System	13	13	0
Aluminum Co. of America	12	3	9
Illinois Municipal Retirement Fund	12	12	0
Ashland Oil Inc.	12	12	0.0
Army and Air Force Exchange Service	10	10	0
Chrysler Corp.	10	2	8
The Episcopal Ministers	10	10	0
Illinois Teachers Retirement System	10	10	0
Philip Morris Inc.	9	9	0
Dart & Kraft Inc.	5	5	0
General Foods Corp.	5	5	0
Southern California Edison Co.	5	5	0
Marathon Oil Co.	4	4	0
Raytheon Co.	4	4	0
Detroit Retirement Systems	2	0	2
TOTAL	6,830		

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General Dynamics

	($ millions)
Total assets	2,517
Pension	1,590
Profit-sharing	0
Thrift or savings	927
Employer contributions	100
Benefit payments	35

CLAYTON, Mo. — General Dynamics hired three new equity managers in 1983: Miller, Anderson & Sherrerd; Frank Russell Trust Co.; and Spears, Benzak, Salomon & Farrell Inc.

Equity managers: Aetna Capital Management; Alliance Capital Management; Anderson, Hoagland & Co.; Campbell Advisors; Citibank; Gregg McKay Knight & McKay; Miller Anderson & Sherrerd; Neuberger & Berman Pension Management; Provident Investment Counsel; Lindner Management; Lieber & Co.; Lazard Freres & Co.; A.M. Kailing & Associates; Jundt/Capen Associates; Frontier Capital Management; First Pacific Advisors; Essex Investment Management; Equitable Investment Management; Delaware Investment Advisers; Frank Russell Trust Co.; Seibel Capital Management; Sit Investment Associates; and TCW Asset Management.

Bond managers: BA Investment Management; Centerre Trust; Chase Investors Management; Discount Corporation of New York Advisers; and Bankers Trust Co.

GICs: Aetna Life & Casualty; Equitable Life Assurance; John Hancock; Metropolitan; Mutual Benefit; Mutual of New York; and Travelers.

The sponsor has $100 million of its assets managed internally, roughly $244 million is invested in GICs.

Master trustee for the pension fund is Chase Manhattan; Bankers Trust is master trustee for the savings program.

Key personnel include John P. Maguire, vice president and secretary, and Charles D. Walbrandt, staff vice president-employee benefit trust investments.

General Electric Co.

	($ millions)
Total assets	11,993
Pension	9,762
Profit-sharing	0
Thrift or savings	2,231
Employer contributions	712
Benefit payments	362

STAMFORD, Conn. — General Electric's total assets of $11.9 billion were up 28% for the year ended Sept. 30 from the $9.4 billion of 1982.

A large segment of the assets, $9.7 billion, is managed in-house, through a wholly owned subsidiary, General Electric Investment Co.

General Electric has about $95 million in international investments with a breakdown of $51 million in international equities and $44 million in fixed income.

International managers: G.T. Capital Management, Fidelity International, Lombard Odier International, Morgan Grenfell Investment, Nomura Capital and Price-Fleming International.

The fund uses options and had $185 million in GICs as of Sept. 30.

The company was the lead investor in late 1983 in an oil and gas private placement deal with Pennzoil Co.

The fund makes some investments in venture capital. There was a less than 4% weighting in venture capital investments of the total assets.

In October 1983, the pension fund committed to a subordinated debt and equity leveraged buy-out fund by Forstmann Little & Co.

A 401(k) plan will be added to General Electric's employee benefits roster in 1984.

The approximate asset mix of the fund as of Sept. 30 was 50% stocks, 31% bonds, 2% cash equivalents, 4% real estate equity, and 9% mortgages.

Individuals who oversee investment of the funds are D.H. Malone, vice president-investments; A.S. Bahr, manager-equity investments; J.A. Hickey, manager-special equity investments; and F.X. Tansey, manager-fixed income investments.

General Foods Corp.

	($ millions)
Total assets	1,500
Pension	1,400
Profit-sharing	0
Thrift or savings	100
Employer contributions	na
Benefit payments	na

WHITE PLAINS, N.Y. — General Foods Corp. appointed Northern Trust as master trustee to the Oscar Mayer portion of its $1.5 billion pension fund as of Jan. 1, 1983.

Pension assets of General Foods and its subsidiaries increased 30.43% during the year ended Sept. 30.

The company hired John Hancock Venture Capital Management and The Northern Trust Co. as investment managers during the year, and dropped Cooke & Bieler, and Wells Fargo.

The current investment managers include Aetna Life; Alliance Capital; Bankers Trust; Batterymarch; BEA Associates; Chase Investors; Citibank; First Wisconsin National Bank of Madison; Jennison Associates; John Hancock Mutual Life; JMB Institutional Realty; Metropolitan Life; Morgan Guaranty; New Court Realty; New Court Partners; N.M. Rothschild International Asset Management; Prudential Insurance; Rothschild Asset Management; Thorndike, Doran, Paine & Lewis; and Trinity Investment Management.

The approximate asset mix was 51% stocks, 30% bonds, 15% cash equivalents and 4% real estate equity.

Key investment personnel are R.D. Nargi, assistant treasurer; R.A. Weimert, manager; and S.C. Philbrick, assistant manager.

General Motors Corp.

	($ millions)
Total assets	19,500
Pension	17,800
Profit-sharing	0
Thrift or savings	1,700
Employer contributions	na
Benefit payments	na

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NEW YORK — Although no assets are managed in-house at present, L. Guy Palmer II is joining General Motors at the end of January to become director of internal pension asset management. Mr. Palmer was previously a principal of Davis, Palmer & Biggs, a senior vice president at Fiduciary Trust Co., and most recently was with Ayco Financial Services.

General Motors' pension and thrift plan assets reached $19.5 billion as of Sept. 30, 1983, according to *Pensions & Investment Age* estimates. Of this, about $17.8 billion was in pension assets and $1.7 billion was in thrift plan assets.

The assets totaled $16.8 billion as of Dec. 31, 1982, the last date for which GM would provide figures. Pension assets as of that date were $15 billion.

Also as of Dec. 31. 1982, the mix of the pension assets was 42.3% equity, 29.7% bonds, 4.2% cash equivalents, 3.1% real estate equity and 20.7% insured assets.

Managers: American National Bank of Chicago, AmeriTrust, Bank of America, Bankers Trust, Boston Co., Capital Guardian Trust, Chase Investors Management, Citibank, First National Bank of Boston, First National Bank of Chicago, Harris Trust, InterFirst Bank Dallas, Lincoln Capital Management, Manufacturers Hanover Trust, Mellon Bank, Metropolitan Life, Morgan Guaranty Trust, National Bank of Detroit, and Wells Fargo Investment Advisors. GM declined to specify the types of investments each manager is making.

International managers: Baring International, Daiwa International, Fidelity International, G.T. Capital Management, Kleinwort Benson International, Morgan Grenfell Investment Services, Nomura Capital Management, Rowe Price-Fleming, and Schroders. .

GM declined to reveal how much of the assets was invested internationally.

W. Gordon Binns Jr., chief investment funds officer, and R. Charles Tschampion, director-investment managers relations, oversee the operation of the fund.

Georgia State Retirement Systems

	($ millions)
Total assets	4,214
Pension	4,214
Profit-sharing	0
Thrift or savings	0
Employer contributions	341
Benefit payments	232

ATLANTA — The Georgia State Retirement Systems hired INVESCO Capital Management as an equity adviser for both the Teachers' Retirement System and the Employees' Retirement System.

Trust Co. of Georgia and Thorndike, Doran, Paine & Lewis also were hired to advise the teachers' fund on its equities investments.

Equity managers: Citizens & Southern National Bank, Trust Co. of Georgia and Thordike, Doran, Paine & Lewis, all for the teachers fund only; First National Bank of Atlanta for only the employees' fund; and INVESCO for both.

The asset mix of the fund, as of Sept. 30, was 39.2% stocks, 55.6% bonds, 4.2% cash equivalents and 1% mortgages.

Graham R. Lynch is director, division of investment services; C.W. Cary, assistant director of the division; and Nancy Boedy, bond portfolio officer.

Look for the new corporate finance directory March 19.

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Continental Illinois National Bank	15.9%
Beverly Bank	15.8%
First of Elgin	15.7%
Gary Wheaton Bank	15.5%
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Getty Oil

	($ millions)
Total assets	969
Pension	721
Profit-sharing	0
Thrift or savings	248
Employer contributions	42
Benefit payments	27

LOS ANGELES — Employee benefit assets at Getty Oil reached $969 million as of Sept. 30, a 35.2% increase from 1982's $710 million.

During the year, Getty Oil added three new equity managers, Avatar Associates, McKenzie, Walker Investment Management and Rollert & Sullivan, and two new bond managers, Robert C. Brown & Co. and STW. Equity managers EM&R, MacKay-Shields and Citibank were dropped.

Equity managers: Fred Alger; Frontier Capital; Avatar Associates; Jennison Associates; McKenzie, Walker; Rollert & Sullivan; and Security Pacific Investment Management.

Bond managers: CMB Investment Counselors, Robert C. Brown & Co. and STW.

Real estate manager: Citibank.

The approximate asset mix was 64% stocks, 19% bonds and 17% cash equivalents.

In-house management of pension assets was $101 million. Of that, $42 million was in fixed income and $59 million was short-term. Also, $42 million of the pension assets was placed in GICs.

The company has a 401(k) plan.

Chase Manahattan Bank is the master trustee.

Key personnel are: C. Stedman Garber, treasurer; Bruce C. Anderson, assistant treasurer; and Stephen L. Watson, supervisor-investment funds.

Goodyear Tire & Rubber

	($ millions)
Total assets	1,788
Pension	1,788
Profit-sharing	0
Thrift or savings	0
Employer contributions	56
Benefit payments	115

AKRON, Ohio — Richard Galloway, assistant treasurer, assumed pension-fund investment responsibilities for Bennett Shaver, who resigned in October 1982.

Goodyear's pension plan assets grew slightly to $1.788 billion on Sept. 30 from an estimated $1.5 billion in 1982. On Sept. 30, its asset mix was 55% stocks, 30% bonds, 7% cash and 8% real estate equity. The plan has $45 million in overseas equities but no indexed assets or GICs.

The fund added no new managers in 1983.

Balanced managers: Prudential Insurance Co., Morgan Guaranty Trust, Equitable Life Assurance, Chemical Bank, Citibank and National Bank of Detroit.

Equity managers: National City Bank of Cleveland and Travelers Investment Management Co..

Real estate managers: Prudential, Morgan Guaranty and Equitable. The firm does not manage pension assets internally; it has no master trustee.

Aside from Mr. Galloway, key personnel overseeing the fund are James Glass, group executive vice president, and Donald Kronenburger, vice president and treasurer.

Greyhound Corp.

	($ millions)
Total assets	826*
Pension	826
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

*As of June 30, 1983

PHOENIX — As of June 30, employee benefit assets at Greyhound totaled $826 million, according to the 1984 Money Market Directory.

Managers: Aetna Life; CIGNA; MH/Edie Investment Counsel; National Bank of Detroit; United Capital Management; Citibank; Wells Fargo Investment Advisors; Robert C. Brown & Co.; Security Pacific Investment Managers; Wright Investors' Service; Loomis, Sayles & Co.; and Stein Roe & Farnham.

The approximate asset mix, according to the Money Market Directory, was 44% stocks, 15% bonds, 6% cash equivalents, 1% real estate equity, 5% GICs and 29% general insurance account.

According to the directory, the fund had $41.3 million of its pension assets indexed and $115.6 million placed in GICs.

Richard B. Zoller, vice president-investments, oversees the investment management of the pension fund.

Grumman Corp.

	($ millions)
Total assets	1,483
Pension	1,058
Profit-sharing	4
Thrift or savings	421
Employer contributions	na
Benefit payments	na

BETHPAGE, N.Y. — The trustees of the Grumman Corp. pension fund were told by a U.S. District Court judge in September that a Labor Department suit against them charging imprudence and improper conduct will go to trial.

The legal action centers on the acquisition of corporate stock for the pension fund as a measure to thwart an attempted takeover by LTV Corp.

After an injunction preventing the sale of that stock was amended this spring, the pension plan sold 1.158 million shares for more than $13 million.

Grumman reported $1,348 million in total employee benefit assets as of Dec. 31, 1982, an increase of 41% over the previous year, of which $971 million was in the pension fund, an increase of 40%. *Pensions & Investment Age* estimates Grumman total assets, as of Sept. 30, 1983, were $1,483 million and pension assets, $1,058 million.

Among external managers, Fiduciary Trust Co. was added for both equity and fixed-income management, and Bank of New York was dropped in both .

Equity managers: Connecticut General Life Insurance Co. and Fiduciary Trust.

Bond manager: Fiduciary Trust.

Real estate managers: Prudential and Equitable.

Based on the Dec. 31, 1982, figures supplied, Grumman manages $902 million in-house: $429 million stocks, $329 million bonds and $144 short-term.

Grumman uses options and offers a 401(k) plan.

The approximate asset mix was 46% stocks, 35% bonds, 13% cash equivalents, 5% real estate equity and 1% venture capital.

Bank of New York is the master trustee.

R.G. Freese, senior vice president-finance and treasurer, and W.R. Parmentier, assistant treasurer and investment manager, oversee the investment operation of the fund.

GTE Service Corp.

	($ millions)
Total assets	4,800
Pension	4,800
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

STAMFORD, Conn. — Richard H. Klemm was promoted to vice president-pension fund management of GTE Service Corp., and given overall responsibility for the operations of the fund.

As of Sept. 30, GTE's pension assets increased 23% to $4.8 billion from $3.9 billion in 1982.

Managers: Aetna Capital Management; Bankers Trust Co.; Baring International; Bartow, McLeod International; Beacon Financial Management; BMI Capital Corp.; Boston Co.; Cashman, Farrell & Associates; Century Capital; Citibank; Endowment Management & Research; Fidelity International; First Pacific Advisors; First & Merchants National Bank; Forstmann-Leff Associates; Franklin Portfolio Associates; Frontier Capital Management, General American Investors; GeoCapital Corp.; GTE Investment Management; G.T. Capital Management; Hambrecht & Quist Equity Management; Hathaway Associates; Hellman, Jordan Management; Hoisington Investment Management; Hotchkis & Wiley; Ivory & Sime International; Johnson, Valliant & Broadfoot; Kingsley, Jennison, McNulty & Morse; MacKay-Shields Financial Corp.; Manufacturers Hanover Trust; Marine Trust; Morgan Grenfell; Morgan Guaranty Trust; Morgan Stanley Asset Management; Neville, Rodie & Shaw; Pacific Investment Management Co.; Pioneering Management; T. Rowe Price; Provident Investment Counsel; Putnam Advisory; Roley, Nichols & Co.; Rowe Price-Fleming International; Fayez Sarofim; Schafer Capital Management; Trust Co. of the West; Trustee & Investors; Value Line Asset Management; Warburg, Pincus Counsellors; Wentworth, Hauser & Violich; and Wilkens & Nanovic Associates.

GTE invests in international, real estate, venture capital and oil and gas. It also uses options on its equity portfolios.

During the year it dropped out of PRISA, but Morgan Guaranty and Citibank continue as real estate advisers. Balch, Hardy & Scheinman was dropped as an options manager.

GTE manages $577 million internally in bonds.

GTE plans to start up a 401(k) plan in 1984.

Andrew L. Heiskell, vice president-fixed income, oversees bond investments; Gregory B. Densmore, director of investment evaluation, also is involved in fund administration.

25 largest profit-sharing plans

($ millions)

Rank	Fund/sponsor	Assets
1.	Sears, Roebuck & Co.	3,800
2.	Procter & Gamble Co.	1,761
3.	Xerox Corp.	1,420
4.	Standard Oil Co. of California	1,399
5.	Lockheed Corp.	997
6.	J.C. Penney Co	958
7.	Bechtel Power Corp.	898
8.	Halliburton Co.	757
9.	McDonnell Douglas	734
10.	Eastman Kodak	700
11.	American Bar Retirement Association	621
12.	Signal Companies Inc.	500
13.	Northrop Corp.	499
14.	Caterpillar Tractor Co.	350
15.	Texas Instruments Inc.	350
16.	Union Oil Co. of California	298
17.	Philip Morris Inc.	268
18.	Dart & Kraft Inc.	184
19.	The LTV Corp.	167
20.	Citibank	164
21.	Shell Pension Trust & Provident Fund	142
22.	Standard Oil Co. (Ind.)	140
23.	CIGNA Corp.	133
24.	Minnesota Mining and Manufacturing Co.	126
25.	John Hancock Mutual Life Insurance Co.	108
	TOTAL	17,282

Gulf Oil Corp.

	($ millions)
Total assets	2,051
Pension	1,854
Profit-sharing	0
Thrift or savings	197
Employer contributions	na
Benefit payments	137

PITTSBURGH — Gulf Oil Corp.'s dedicated assets increased to $545.5 million in 1983 from $394.1 million in 1982, the year Gulf dedicated. The entire fund's assets passed $2 billion, up from $1.6 billion in 1982.

The asset mix was 40% stocks, 29% bonds, 12% cash and 19% GICs. No alternative investments or options and futures are used.

Equity managers: Jennison Associates Capital Corp., Putnam Advisory Co., MacKay-Shields Financial Corp. and Rosenberg Capital Management.

Bond managers: Pacific Investment Management Co.

Dedicated managers: State Street Bank & Trust Co. and Mellon Bank.

Mellon is also master trustee.

Gulf offers a 401(k) program.

Colin M. Short, vice president-finance; W.D. McGuinness, assistant treasurer; and J.E. Saxer Jr., manager-pension fund investments, oversee the fund.

Halliburton Co.

	($ millions)
Total assets	785
Pension	0
Profit-sharing	757
Thrift or savings	28
Employer contributions	na
Benefit payments	43

DUNCAN, Okla. — The Halliburton Co's employee benefit assets rose 23% to $785 million for the year ended Sept. 30.

The profit-sharing plan holds the majority of assets, $757 million, with $28 million in the thrift or savings plan.

About $196.2 million, 25%, of the total employee benefits are managed internally. The asset mix inhouse as of Sept. 30 was 90% equities, 2% fixed income, and 8% in short term.

As of July 1, 1984, Halliburton Co. will add a company 401(k) plan.

Balanced managers: Interfirst Investment Management, Lehman Brothers and Vaughan, Nelson & Hargrove.

Equity manager: Forstmann-Leff.

Bond manager: Pacific Investment Management.

The asset mix for the combined profit-sharing and thrift plans was 48% stocks, 35% bonds, 15% cash equivalents and 2% mortgages.

William Sheets, plan administrator, and Nathaniel C. Duffield, financial manager are the key personnel overseeing the fund.

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($ millions)

Fund	Total	Equity	Fixed	Cash
California Public Employees	20,438	4,800	12,100	705
New York State Common	17,000	5,400	7,300	3
New York State Teachers	10,700	4,600	5,800	300
General Electric Co.	9,707	5,204	4,275	228
N.J. Investment Division	9,032	3,085	4,118	804
Texas Teachers	8,612	2,655	5,635	321
Michigan State Employees	8,271	2,681	4,861	729
Wisconsin Investment Board	7,900	3,550	3,650	700
Ohio Teachers	7,810	2,711	2,936	1,034
Ohio Public Employees	7,550	2,000	5,050	500
U.S. Steel and Carnegie	7,310	5,336	na	na
N.C. Retirement System	6,998	1,444	5,439	115
E.I. du Pont de Nemours & Co.	6,685	4,110	2,314	261
Florida Administration Board	6,205	2,536	3,281	388
Minnesota SBI	4,567	2,277	1,969	321
New York City Employees	4,383	0	1,944	2,439
Georgia State Systems	4,214	1,652	2,386	176
University of California	4,012	3,100	832	80
Alabama Retirement Systems	3,506	102	3,161	243
United Nations Joint Staff	3,394	1,857	1,204	95
Washington State Board	3,300	570	1,800	500
IBM	3,242	na	na	na
Colorado Public Employees	3,138	1,697	1,312	129
Maryland State Systems	3,099	1,514	1,562	23
Tenn. Consolidated System	2,967	890	1,839	207
Prudential Insurance	2,654	1,445	567	369
S.C. Retirement System	2,652	0	2,495	157
Mass. State Funds	2,400	156	2,170	75
Union Carbide Corp.	2,400	1,300	1,000	100
Exxon Corp.	2,364	1,979	193	192
Texas Employees	2,351	565	1,760	25
Westinghouse Electric	1,900	563	1,337	0
Oregon Public Employees	1,800	0	1,800	0
Metropolitan Life	1,796	na	na	na
Procter & Gamble Co.	1,761	na	na	na
AT&T	1,600	1,600	0	0
L.A. County Employees	1,600	0	1,250	350
Electrical Workers	1,508	323	905	280
Sears, Roebuck & Co.	1,500	750	650	100
Illinois Investment Board	1,449	761	612	76
Alaska State System	1,374	0	726	0
Virginia Supplemental	1,353	322	984	47
Connecticut Systems	1,311	0	822	280
Atlantic Richfield Co.	1,300	750	390	160
Utah State Systems	1,176	129	788	195
Ohio Police and Firemen	1,103	0	926	177
Commonwealth Edison Co.	1,098	575	458	65
Citibank	1,078	645	253	91
Ohio School Employees	1,024	15	790	78
San Francisco City & County	1,016	6	942	68
Firestone Tire & Rubber	1,000	400	600	0
Deere & Co.	964	757	179	28
Aetna Life & Casualty	949	481	371	11
New York Life Insurance	938	0	858	0
Grumman Corp.	902	429	329	144
Shell	845	132	693	20
Travelers Corp.	769	248	409	112
Teledyne Inc.	742	275	401	59
New Mexico Educational	725	65	595	65
Sperry Corp.	700	520	100	80
CIGNA Corp.	694	322	320	39
Hawaii Employees	687	0	658	29
Montana Board of Investments	682	129	550	3
Philadelphia Municipal	674	0	674	0
McDermott International Inc.	650	5	645	0
John Hancock Mutual Life	633	285	285	63
Republic Steel Corp.	620	318	212	90
GTE Service Corp.	577	0	577	0
Textron Inc.	543	109	353	81
Chicago Teachers	440	132	264	44
Allied Corp.	400	110	290	0
Hughes Aircraft Co.	384	145	0	239
United Air Lines Inc.	381	0	248	133
Dow Chemical Co.	365	235	105	25
Standard Oil Co. (Ind.)	360	338	20	2
Tenneco Inc.	350	65	235	50
Mobil Oil Corp.	300	0	200	100
Armco Inc.	260	0	220	40
United Methodist Pension	253	0	127	126
Southern Baptist Convention	244	0	227	17
Operating Engineers	232	0	164	68
Detroit Retirement Systems	230	0	23	207
TRW Inc.	224	195	6	23
ITT	210	123	55	32
Nat'l Rural Electric Co-op	206	52	108	46
Arizona State System	200	0	0	200
Louisiana Teachers	200	0	0	200
United Mine Workers	200	0	0	200
Halliburton Co.	196	176	4	16
Litton Industries Inc.	192	46	130	16
Los Angeles City Fire & Police	186	0	0	186
Kentucky Retirement Systems	184	0	0	184
Nevada Public Employees	170	na	na	na
Louisiana State Employees	160	0	30	130
Eastern Air Lines	140	0	140	0
Martin Marietta Corp.	130	60	70	0
Arkansas Teachers	128	0	40	88
Kansas Public Employees	123	0	0	123
FMC Corp.	115	100	15	0
Getty Oil	111	0	42	59
Iowa Public Employees	108	0	19	89
Marine Engineers	104	0	0	104
General Dynamics	100	0	100	0
Oklahoma Teachers	100	0	0	100
Kentucky Teachers	97	0	97	0
Warner-Lambert Co.	94	24	70	0
Bechtel Power Corp.	90	0	90	0
New Mexico Public Employees	78	0	78	0
Abbott Laboratories	75	0	75	0
American Airlines	75	25	28	22
Teamsters, Central States	75	0	0	75
Eaton Corp.	70	70	0	0
Raytheon Co.	65	42	15	8
Standard Oil of California	63	0	0	63
Indiana Public Employees	61	0	58	3
Mississippi Public Employees	52	0	43	9
L.A. Water & Power Employees	51	0	0	51
Ashland Oil Inc.	50	10	30	10
J.C. Penney Co.	50	0	25	25
Dart & Kraft Inc.	40	0	0	40
Owens-Illinois Inc.	39	39	0	0
United Presbyterian Church	18	0	0	18
Boilermakers, Blacksmiths	10	0	0	10
Continental Group Inc.	8	8	0	0
World Bank Staff	5	5	0	0
TOTAL	238,675	82,130	118,598	17,191

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John Hancock Mutual Life Insurance Co.

($ millions)

Total assets	847
Pension	733
Profit-sharing	106
Thrift or savings	8
Employer contributions	8
Benefit payments	31

BOSTON — John Hancock Mutual Life Insurance Co.'s own employee benefit assets increased 21% to $874.1 million Sept. 30 from $700 million in 1982. The asset mix is 38.9% stocks, 42.9% bonds, 8.6% cash and 9.6% real estate equity.

John Hancock manages all its pension and profit-sharing assets and the fixed-income investments for the profit-sharing plan.

Through its insurance company investments, the fund holds small amounts of venture capital and oil and gas investments.

About $35 million in profit-sharing equities are managed by outside managers:

Equity managers: IDS Advisory and T. Rowe Price & Associates.

John Hancock started a 401(k) plan for its employees effective Jan. 1, 1984. It offers an IRA program.

Overseeing the fund are Philip Saunders Jr., senior vice president and treasurer and financial services and Robert Thurrell, general director-corporate benefits.

Hawaii Employees' Retirement System

($ millions)

Total assets	2,013
Pension	2,013
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

HONOLULU — The Hawaii Employees' Retirement System hired Irving Trust Co. as master custodian in 1983, replacing Bank of America.

Pension assets as of Sept. 30, were $2.013 billion.

Equity managers: Delaware Investment Advisors, Eagle Management & Trust and Loomis, Sayles & Co.

Bond managers: Fayez Sarofim & Co., Lehman Management Co., Pacific Investment Management Co., Security Pacific Investment Advisers and Wentworth, Hauser & Violich.

Balanced managers: Bernstein-Macauley and Scudder, Stevens & Clark.

International managers: Daiwa International Capital Management Corp. and Nomura Capital Management Inc.

The asset mix as of Sept. 30 was 25% stocks, 40% bonds, 8% cash and 26% mortgages.

Stanley Siu is executive director, and David Shimabukuro is assistant executive director.

Hercules Inc.

($ millions)

Total assets	976
Pension	846
Profit-sharing	0
Thrift or savings	130
Employer contributions	40.8
Benefit payments	31.2

WILMINGTON, Del. — Hercules Inc. hired Wells Fargo Investment Advisors to run a stock-index fund and a money market fund for its newly combined savings and 401(k) plans in 1983. The pension fund added Beutel Goodman Capital Management to run a $30 million equity account.

Equity managers: Batterymarch Financial Management, Capital Guardian Trust, Citi-Investments, Cooke & Beiler, and General American.

Bond managers: Robert C. Brown & Co.

GICs: Aetna Life & Casualty, Equitable Life, New York Life, Prudential, Travelers and Union Mutual.

Real estate managers: Aetna, Equitable and Prudential.

International managers: Fidelity International, Morgan Guaranty and Warburg Investment Management International.

Total employee benefit assets increased 28.4% to $975.7 million as of Sept. 30.

The pension fund invested $159 million in dedicated bond funds and $163 million in GICs.

The pension fund had $38 million invested in foreign markets, of which $35 million was equity and $3 million was fixed-income.

The approximate asset mix was 41.6% stocks, 44.8% bonds, 4.1% cash equivalents and 9.5% real estate equity.

Bankers Trust is the master trustee for the pension fund and Chase Manhattan Bank provides global custody for the international investments. Delaware Trust Co. is trustee of the savings plan.

Hercules has a 401(k) savings plan.

Priscilla Wellford is manager-pension trust.

Look for the annual investment adviser directory April 30.

Honeywell Inc.

	($ millions)
Total assets	1,125
Pension	1,025
Profit-sharing	0
Thrift or savings	100
Employer contributions	88
Benefit payments	33

MINNEAPOLIS — As of Sept. 30, Honeywell had total employee benefit assets of about $1.1 billion, a 35% jump from $813 million in 1982.

In 1983, Honeywell committed $10 million to American Gas and Oil Investors II fund, a limited partnership.

Equity managers: Forstmann-Leff Associates, Batterymarch Financial Management, Abel-Noser, Dawson-Henry, GAMCO, RCB Group Trust, Trust Co. of the West, Herbert Smith, Siebel Capital, Alliance Capital, and Jundt-Capen Associates.

Bond manager: Fischer, Francis, Trees & Watts.

Real estate managers: State Street Bank, Coldwell Banker, Landauer, John Hancock, and Equitable Life.

The approximate asset mix of the pension fund was 50% stocks, 25% bonds, 10% cash equivalents, 5% real estate equity, 5% mortgages, 4% venture capital and 1% oil and gas.

Honeywell's fund has $170 million in dedicated bond funds and $31 million in GICs.

The funds use options, venture capital, and oil and gas.

Chase Manhattan is the master trustee.

R.T. Mall, vice president-pension investments and D.W. Veverka, manager-financial planning, are key investment personnel.

Houston Retirement System

	($ millions)
Total assets	705
Pension	705
Profit-sharing	0
Thrift or savings	0
Employer contributions	56
Benefit payments	25

HOUSTON — The Houston Retirement System had $705 million as of Sept. 30. The asset mix was 40% stocks, 55% bonds and 5% cash.

Balanced managers: First City National Bank of Houston, Texas Commerce Bank, Eagle Management & Trust and Vaughan, Nelson & Hargrove.

William Brown Jr. is treasurer and oversees the fund.

Hughes Aircraft Co.

	($ millions)
Total assets	2,724
Pension	2,112
Profit-sharing	0
Thrift or savings	612
Employer contributions	90
Benefit payments	30

LOS ANGELES — Hughes Aircraft Co.'s employee benefit assets increased 44% to $2.7 billion as of Sept. 30, 1983.

Of Hughes' pension assets $384 million is managed internally, with $145 million invested in stocks and $239 million in short-term investments.

Equity managers: Alliance Capital Management; Dillon Reed; Eberstadt Asset Management; Forstmann-Leff; Frontier Capital Management; Hagler, Mastrovita & Hewitt; Jennison Associates; Johnson, Valliant & Broadfoot; MacKay-Shields; McKenzie Walker Investment Management; Neuberger & Berman; T. Rowe Price; Reich & Tang; Rosenberg Capital Management and TCW Asset Management.

Real estate: Coldwell Banker, Rosenberg Real Estate Equity Fund and TCW Realty Advisors.

The company puts little of its employee benefit assets in bonds, and has no external bond managers. As of Sept. 30, the pension asset mix was 75% stocks, 6% bonds, 7% cash equivalents, 6% real estate and 6% venture capital and other, unspecified investments.

The fund has $40 million invested in international equity markets.

Its master trustee is Bankers Trust. Key personnel overseeing investment managers are Thomas V. Keene, senior vice president-finance; and Gary B. Helms, staff vice president-investment management.

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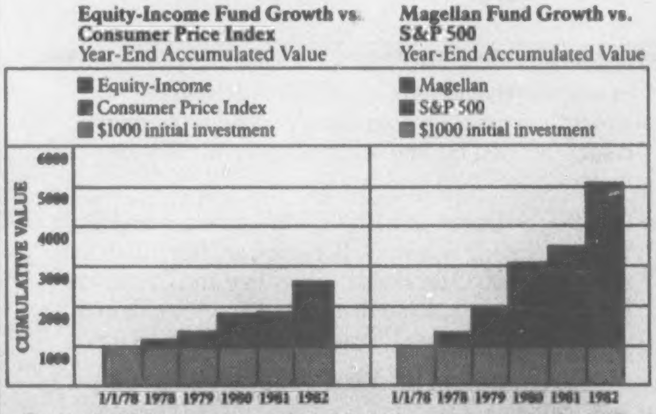

Equity-Income Fund Growth vs. Consumer Price Index
Year-End Accumulated Value

Magellan Fund Growth vs. S&P 500
Year-End Accumulated Value

The above fund figures are total returns that include the change in net asset value plus the effect of reinvesting income dividends and capital gain distributions in additional shares, and have been adjusted to show the effect of Magellan Fund's 3% sales charge and Equity-Income's 2% sales charge. If your 401(k) plan covers more than 200 employees these sales charges may be waived. These figures update those found in each fund's prospectus. Market conditions fluctuate and these figures are not an indication of future results.

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I.A.M. National Pension Fund

	($ millions)
Total assets	770
Pension	770
Profit-sharing	0
Thrift or savings	0
Employer contributions	72
Benefit payments	56

WASHINGTON — Assets of the I.A.M. pension fund increased 28% to $770 million on Sept. 30.

Balanced managers: Dodge & Cox Inc., Drexel Burnham Lambert, Pacific Investment Management Co., Pacific Mutual Life Insurance Co. and L.F. Rothschild, Unterberg, Towbin.

The asset mix as of Sept. 30 was 48% stocks, 43% bonds, 4.7% cash and 3.9% real estate equity.

Master trustee is State Street Bank & Trust. Alan W. Skolnick is fund director.

Illinois Municipal Retirement Fund

	($ millions)
Total assets	1,775
Pension	1,775
Profit-sharing	0
Thrift or savings	0
Employer contributions	98.5
Benefit payments	116.5

CHICAGO — The total market value of the Illinois Municipal Retirement Fund increased 28.6% to $1.8 billion Sept. 30 from $1.4 billion a year earlier. The entire amount is pension assets.

The asset mix as of Sept. 30 was 38% stocks, 56% bonds and 6% cash equivalents.

Equity managers: Dillon Read Capital and MacKay-Shields Financial Corp.

Bond managers: Criterion Investment Management and Manufacturers Hanover Trust.

Ralph Kausch is executive director of the fund, Hiro Mori is investment manager and Walt Koziol is assistant investment manager.

Illinois State Board of Investment

	($ millions)
Total assets	1,555
Pension	1,555
Profit sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

CHICAGO — In June, the Illinois State Board of Investment hired Northern Trust as master trustee, and committed $50 million to three closed-end realty funds.

The $50 million was split among The First National Bank of Chicago's apartment fund, The HAC Group Trust, and JMB Realty Corp.'s Group Trust II.

The board's total assets rose 27% as of Sept. 30 to $1.55 billion from $1.2 billion the previous year.

As of Sept. 30, about $1.45 billion was managed in-house, with $761 million committed to equities, $612 million to fixed income and $76 million in short-term investments.

Real estate managers: Aetna Life & Casualty, First National Bank of Chicago, HAC Group Trust and JMB Institutional Realty.

The Northern Trust Co. is master trustee.

The portfolio mix of the pension assets was 48.9% stocks, 39.3% bonds, 4.9% cash equivalents, and 6.9% real estate equity.

Key investment personnel are Robert J. Harmon, director; Larry G. Darlington, portfolio manager-fixed income; and Nancy L. Folstad, portfolio manager-equity.

Illinois Teachers Retirement System

	($ millions)
Total assets	3,600 *
Pension	3,600
Profit-sharing	0
Thrift or savings	0
Employer contributions	144
Benefit payments	262

*As of June 30, 1983

SPRINGFIELD, Ill. — Two managers exercised their discretion last year and implemented policy changes the Illinois Teachers Retirement System had approved in June 1982. Kemper Financial Services Inc. placed $10 million of the assets it managed for the fund with its international investment division, Kemper-Murray Johnstone International, and Pacific Investment Management Co. included the fund in its program of using futures to supplement its fixed-income manager.

The fund reports $3.6 billion in pension assets on June 30, up 25% from its $2.89 billion level on September 1982. The asset mix is 31.8% stocks, 48% bonds and 20.2% cash. No assets are managed in-house and it has no index investments or GICs.

Equity managers: Batterymarch Financial Management, CMB Investment Counselors, Criterion Management Co. and Kemper.

Bond managers: Dreyfus Management Inc., MacKay-Shields Financial Corp., PIMCO, T. Rowe Price Associates Inc. and Springfield Marine Bank.

Real estate managers: First National Bank of Chicago.

Harris Trust and Savings Bank is the plan's master trustee.

Samuel W. Anderson is the executive director and Charles F. Hofer is investment officer.

Illinois Universities' Retirement System

	($ millions)
Total assets	1,501
Pension	1,501
Profit sharing	0
Thrift or savings	0
Employer contributions	60
Benefit payments	100

CHAMPAIGN, Ill. — In the first quarter of 1983, The Illinois Universities' System invested $25 million in small-company funds with American National Bank & Trust Co. and Dimensional Fund Advisors. Each was allocated $12.5 million.

Also, the fund hired Criterion Investment Management as a balanced manager for $200 million; Lehman Management as a fixed-income manager for $225 million; and Batterymarch Financial Management to handle $100 million in equities.

As of Sept. 30, total assets increased 29% to $1.5 billion from $1.2 billion the previous year.

Equity managers: Alliance Capital Management and American National Bank.

Bond managers: Batterymarch, Criterion Investment and Dimensional Fund Advisors.

Real estate managers: Fayez Sarofim & Co., Lehman Management and Pacific Investment Management.

The Harris Trust & Savings Bank is master trustee.

The asset mix as of Sept. 30 was 47.5% stocks, 35.1% bonds, 15.3% cash equivalents, 0.6% convertibles and 1.5% private placements.

The fund has $31 million invested in an index fund, and $18 million invested in GICs. It has $17 million invested in international equity.

Charles M. Hundley, associate director, oversees the investment of the assets.

Indiana Public Employees' Retirement Fund

	($ millions)
Total assets	1,163
Pension	1,163
Profit sharing	0
Thrift or savings	0
Employer contributions	57
Benefit payments	62

Funds investing in venture capital

Allied Corp.
Aluminum Co. of America
American Electric Power Co.
AT&T
Armco Inc.
Atlantic Richfield Co.
University of California
Chicago Teachers
Citibank
Colorado Public Employees
Conoco Inc.
Continental Group Inc.
Dart & Kraft Inc.
Deere & Co.
Delaware State
Eaton Corp.
Exxon Corp.
Firestone Tire & Rubber Co.
FMC Corp.
Ford Motor Co.
General Electric Co.
General Foods Corp.
General Motors Corp.
Grumman Corp.
GTE Service Corp.
John Hancock Mutual Life
Honeywell Inc.
Hughes Aircraft Co.
Inland Steel
International Business Machines
Eli Lilly & Co.
Litton Industries Inc.
Michigan State Employees
Montgomery Ward & Co.
National Steel Corp.
New York State Common
New York State Teachers
Ohio Public Employees
Ohio School Employees
Ohio Teachers Retirement System
Oregon Public Employees
Owens-Illinois Inc.
J.C. Penney Co.
Republic Steel Corp.
R.J. Reynolds Industries Inc.
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INDIANAPOLIS — In 1983, the Indiana Legislature created the Indiana Institute for New Business Ventures to encourage new business within the state. The Indiana Public Employees Retirement Fund, as well as other Indiana public funds, is allowed to invest in the fixed-income issues of the corporation.

As of Sept. 30, assets increased 7% to almost $1.2 billion from $1.1 billion the previous year.

Of the pension assets, $61 million is managed internally, with $58 million invested in bonds and $3 million invested in short-term instruments. The asset mix was 69% bonds, 6% cash equivalents and 25% government-backed mortgage securities.

Bond managers: American Fletcher National Bank, Indiana National Bank, T. Rowe Price Associates and Lehman Management.

C. Philip Barnes, manager-investment department, oversees the investment of the fund.

Indiana State Teachers' Retirement Fund

	($ millions)
Total assets	727 *
Pension	727
Profit-sharing	0
Thrift or savings	0
Employer contributions	100
Benefit payments	125

*As of June 30, 1983

INDIANAPOLIS — The Indiana State Teachers' Retirement fund assets were $727 million as of Sept. 30, an increase of 13.2% from 1982's total of $642 million.

Bond managers: Alliance Capital, Bank of New York, American Fletcher National Bank, Indiana National Bank and Baxter & Hoops.

The approximate asset mix was 65% bonds, 10% cash equivalents and 25% mortgages.

There is $13 million placed in GICs. The fund does not use international investments, hedging devices or alternative investments.

Key personnel are Loren T. Tiede, executive secretary, and Edmond G. Niehoff, assistant executive secretary.

Inland Steel

	($ millions)
Total assets	1,167
Pension	1,005
Profit-sharing	0
Thrift or savings	162
Employer contributions	78
Benefit payments	76

CHICAGO — Total assets of Inland Steel's employee benefit assets were up 16% in 1983 from the $1 billion reported for 1982.

Trustees appointed four new equity managers effective in December: Sanford C. Bernstein, Dimensional Fund Advisors, INVESCO and Waddell & Reed.

Contributions into the fund, $76 million, were 18% higher than the previous year. Benefits were 21% lower than in 1982, however, when $96 was paid out to retirees.

Equity managers: American National Bank of Chicago; Endowment Management & Research; Equitable Life; First National Bank Chicago; Oppenheimer Capital; Putnam Advisory; and State Street.

Bond managers: Lincoln Income Group.

Real estate managers: Equitable Life; First National Bank Chicago; JMB Realty; and Prudential Insurance.

GICs: Equitable Life.

Venture capital manager: First National Bank Chicago.

Options manager: Oppenheimer Capital.

International managers: Baring International; First National Bank Chicago; and Putnam Advisory.

The approximate asset mix was 61% stocks, 15.6% bonds, 10.4% GICs, 7% cash equivalents and 6% real estate equity.

First National Bank Chicago is the master trustee.

Key personnel are Jay E. Dittus, treasurer, and Richard J. Schutter, manager- pension investments.

International Business Machines

	($ millions)
Total assets	10,118
Pension	10,118
Profit-sharing	0
Thrift or savings	0
Employer contributions	640
Benefit payments	155

STAMFORD, Conn. — IBM's pension assets jumped almost 45% in the 12 months ended Sept. 30, 1983 to $10,118 million.

Besides stocks and bonds, the fund uses almost the full range of investment vehicles — real estate, venture capital, oil and gas, options and financial futures.

The asset mix is 65% stocks, 22% bonds, 5% cash equivalents and 8% real estate equity.

Equity managers: Bankers Trust, Capital Guardian Trust, Citibank, Cole, Yeager & Wood, Delaware Investment Advisers, Dimensional Fund Advisers, G.T. Capital Management, Fidelity International, Hathaway & Associates, Lord Abbett, Morgan Guaranty, P.M. Portfolio Management, Rowe Price-Fleming International, State Street Research & Management, State Street Bank & Trust, T. Rowe Price, Wellington Management and internal management.

Bond managers: Fischer, Francis, Trees & Watts, Jennison Associates and internal management.

Real estate: Prudential, RREEF and Equitable.

Master trustee is Chase Manhattan Bank.

IBM manages $3,242 million internally in equity, fixed and cash. Indexed assets total $274 million.

The company offers employees both a 401(k) plan and a corporate IRA plan.

Key investment officers are B.E. Langton, assistant treasurer; W.V. Hoyt, IBM director of investment strategy; and R.E. Shultz, director of U.S. retirement funds.

International Harvester

	($ millions)
Total assets	1,190
Pension	1,163
Profit-sharing	0
Thrift or savings	27
Employer contributions	40
Benefit payments	220

CHICAGO — The employee benefit assets of International Harvester decreased in market value on Sept. 30 from those last reported on June 30, 1981, by $123 million or 9%.

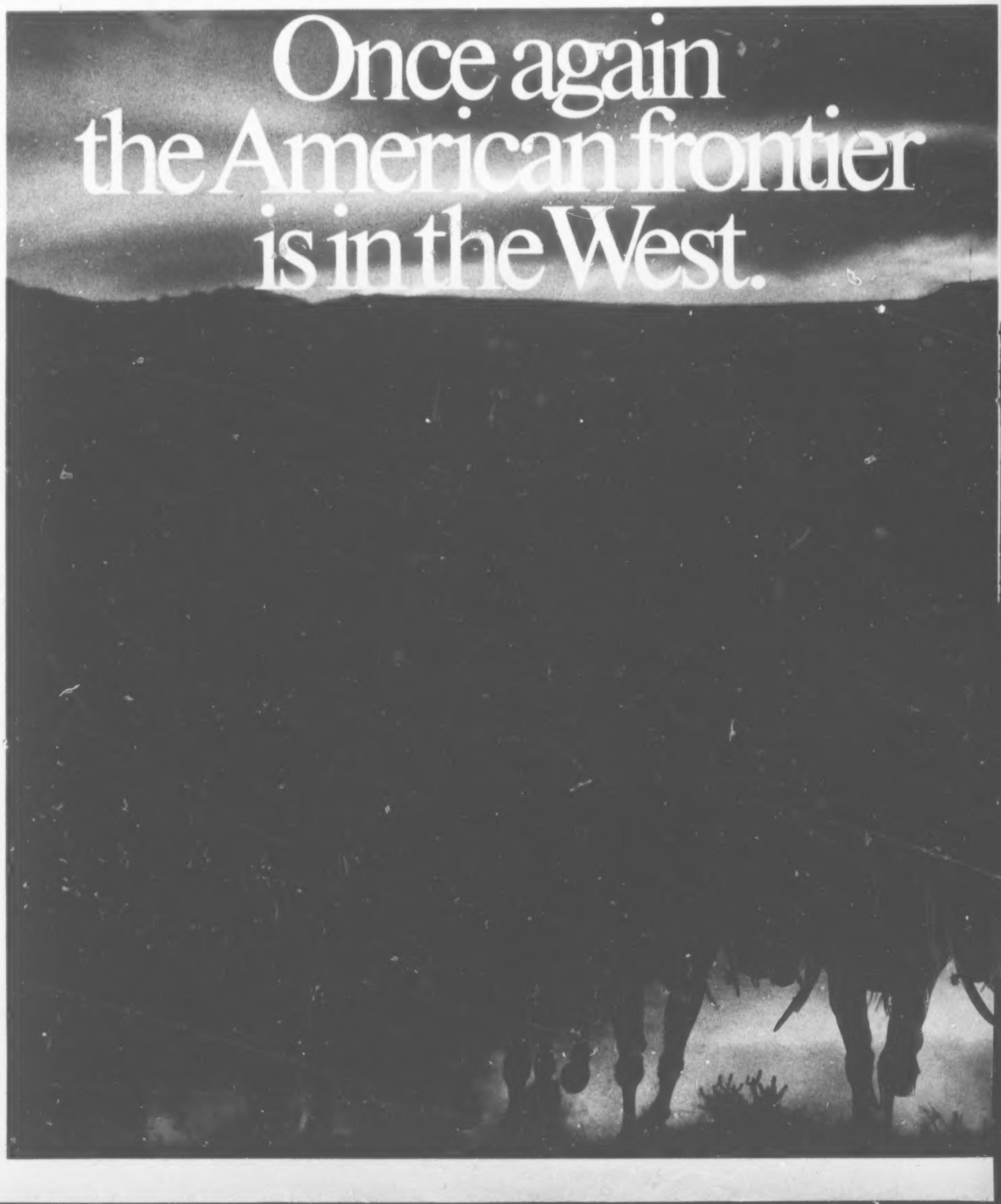
The decrease in assets can be attributed to the benefit payments for the year exceeding the contributions to the fund.

The market value of the assets this year was almost $1.2 billion, which includes $688 million in dedicated bond funds and $146 million in GICs.

Equity managers: Bankers Trust.

Bond managers: Jennison Associates Capital, Aetna Life & Casualty, Association Life Insurance, Equitable Life Assurance and John Hancock Mutual Life.

Real estate managers: Continental Illinois National Bank, First



National Bank, Bankers Trust and Prudential Life Insurance Co.

Key personnel in the organization include James Cotting, vice chairman and chief financial officer, Robert Lannert, vice president and treasurer, and Ashok S. Shende, manager-pension planning.

International Paper Co.

	($ millions)
Total assets	1,237
Pension	1,061
Profit-sharing	0
Thrift or savings	176
Employer contributions	na
Benefit payments	39

CHICAGO — International Paper Co. increased its assets by 25% as of Sept. 30. Of this, $1.06 billion is pension and $176 million is thrift or savings plan assets.

Equity managers: Bankers Trust, Capital Guardian, Endowment Management and Fayez Sarofim.

Bond managers: Bankers Trust, Morgan Guaranty, Pacific Investment and State Street Research.

Real estate managers: Aldrich Eastman & Waltch, Equitable Life, LaSalle Advisors, Prudential Life and RREEF.

GICs: Metropolitan Life.

State Street Bank & Trust Co. is master trustee.

The asset mix as of Sept. 30 was 58% stocks, 19% bonds, 9% cash, 6% real estate equity and 8% GICs.

Donna J. Dean is manager of trust investments.

International Telephone and Telegraph Corp.

	($ millions)
Total assets	1,692*
Pension	1,174
Profit-sharing	27
Thrift or savings	491
Employer contributions	90
Benefit payments	38

*As of June 30, 1983

NEW YORK — ITT Corp. made an initial move into international investment in 1983, funding three international managers with $10 million each in September.

These were Capital Guardian Trust; G.T. Capital Management and Morgan Grenfell Investment Services.

ITT also announced it will be setting up a 401(k) plan for its employees in April.

A new equity manager was named to the pension fund last February: Barrow, Hanley, Mewhinney & Strauss was awarded an account of between $25 million and $30 million.

RepublicBank Dallas was dropped as a balanced manager for the pension plan, but not as trustee bank and fixed-income manager for the profit-sharing plan.

Equity managers: Alliance Capital; Barrow, Hanley, Mewhinney & Strauss; Crocker Investment; Glickenhaus & Co.; Jennison Associates; Morgan Guaranty; T. Rowe Price; and Verus Capital.

Bond manager: Manufacturers Hanover Trust

Real estate managers: Equitable Life; Metropolitan Life; Rosenberg Real Estate; Coldwell Banker; and Corporate Property Investors.

GICs: Aetna Life; Massachusetts Mutual; and Metropolitan Life.

International managers: Capital Guardian Trust; G.T. Capital; and Morgan Grenfell.

The approximate asset mix was 63.3% stocks, 25.1% bonds, 6.4% cash equivalents and 5.2% real estate equity.

The Northern Trust Co. is master trustee for the pension plan. Bankers Trust is trustee for the investment and savings plan.

Edwin J. Ehrlich is director-pension fund trusts.

Iowa Public Employees Retirement System

	($ millions)
Total assets	1,979
Pension	1,979
Profit-sharing	0
Thrift or savings	0
Employer contributions	110
Benefit payments	90

DES MOINES, Iowa — The Iowa Public Employees Retirement System underwent personnel changes last year: Maurice Baringer became fund administrator in place of Ed Longnecker and Larry Thompson replaced Doyle Sales as trust fund specialist.

The fund's assets grew 11.5% to $1.979 billion on Sept. 30 from $1.775 billion in 1982. Its assets are primarily in bonds, 77%, with 18% stocks and 5% cash.

Equity managers: Alliance Capital Management and Capital Guardian Trust.

Bond managers: The Boston Co.

Morgan Guaranty Trust of New York is the master custodian.

k

Kansas Public Employees Retirement System

	($ millions)
Total assets	1,777
Pension	1,777
Profit sharing	0
Thrift or savings	0
Employer contributions	94
Benefit payments	78

TOPEKA, Kan. — In early 1983, the Kansas Public Employees Retirement System committed $20 million to Kansas residential mortgages. The system also approved the use of Treasury bond futures in its fixed-income account managed by Pacific Investment Management.

It terminated the Fourth National Bank of Wichita as a fund manager, when two members of the bank's fixed-income team started up their own firm, Investment Management Group, Wichita.

As of Sept. 30, assets increased 30% to almost $1.8 billion from $1.3 billion the year before. The Kansas system manages $123 million internally, all in short-term investment.

The fund uses options a[illegible]cial futures.

Equity managers: Ca[illegible]pervisors, Investment & C[illegible] Management, Reimer & Koger and the Bankers Trust Co.

Bond managers: Reimer & Koger, Investment Management Group, Robert C. Brown & Co. and Pacific Investment Management.

Other managers: Reimer & Koger and Marine Midland Bank.

Virgil A. Basgall, chairman of the board of trustees, and Marshall Crowther, executive secretary, oversee the investment of the fund.

Kentucky Retirement Systems

	($ millions)
Total assets	1,213
Pension	1,213
Profit-sharing	0
Thrift or savings	0
Employer contributions	75
Benefit payments	48

FRANKFORT, Ky. — The Kentucky Retirement Systems began the restructuring of its portfolio during the year ending Sept. 30.

Our 14 state territory is growing faster than any other region created by the divestiture of AT&T. And that includes BellSouth and Southwestern Bell in the much touted sunbelt. U.S. Bureau of Census projections, released in August of last year, confirm it.

Clearly, our region offers unparalleled opportunities for growth.

While this growth will require some capital investment, it will not compromise our ability to perform profitably.

Pacific Northwest Bell
Northwestern Bell
Mountain Bell

Our cities are growing 81% faster than the national average. That's why we're the fastest growing region.

"GO WEST YOUNG MAN."
Horace Greeley, 1859

"GO WEST YOUNG MAN."
John Naisbitt, 1983

Here's why.

Over the last four years our cost to add new customers to the network has been 7% below the Bell System average (1979-1982).

This is because our population is concentrated in urban areas. Our 9 million customers live in less than 40% of the land mass.

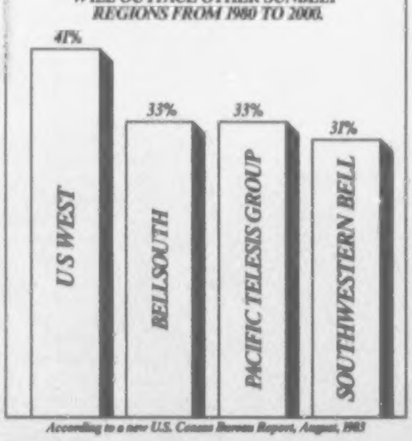
Over 90% of our growth is taking place in urban areas, where expansion is most cost efficient. And where our cities are growing 81% faster than the national average. Five of the ten cities of greatest opportunity, cited by John Naisbitt in his book, MEGATRENDS, are in our region.

More than half of our new customers will be served by expanding our digital capabilities and applying advanced technology. It is no longer necessary to lay expensive copper cable to connect every new customer.

During 1983 we are investing $1.7 billion on construction. And all but a fraction of that cost is being financed internally.

We have a strong foundation with more than $15 billion in assets.

US WEST POPULATION GROWTH WILL OUTPACE OTHER SUNBELT REGIONS FROM 1980 TO 2000.



According to a new U.S. Census Bureau Report, August, 1983

Our major subsidiaries will include three established Bell operating companies (Mountain Bell, Northwestern Bell and Pacific Northwest Bell) as well as five new unregulated subsidiaries.

They, too, are poised to profit from our region's growth.

These new companies include INTERLINE (communications management and service), NEWVECTOR (cellular mobile phone service), U S WEST DIRECT (directory advertising and publishing), BETAWEST (a property development and management unit) and FIRSTEL (a subsidiary to market business communications equipment).

It is our intention to be a pacesetter in the fastest growing industry in the world. But we will not stop there.

We will be more than a phone company. With court approval, we can pursue new businesses outside the regulated arena. And, in order to provide the best return to our stockholders, we will.

Before us lies a new frontier, a new beginning and an opportunity to be part of the fastest growing territory on the horizon.

Ask us for more information about U S WEST. Call **1-800-828-2400.** Or write:
John Trygg, Director of Investor Relations, U S WEST, 7800 East Orchard Road, Suite 290, Englewood, Colorado 80111.

USWEST

We're out to win our spurs.

Capital Supervisors, which had been the fund's sole outside adviser, remains a balanced manager for the fund, working with 65% of the assets. Loomis Sayles & Co. took charge of 18% of the assets for investment in bonds. All changes were being made for diversification, a fund officer said.

Other restructuring is in the works.

Under the guidance of Capital Supervisors, Kentucky put $4 million into a $225 million mortgage used to finance One Mellon Center, the new headquarters building of Mellon Bank in Pittsburgh.

The fund's assets grew by 29.7% in 1983. The amount managed in-house, which is all in short-term investments, grew 47.2% to $184 million.

Equity manager: Capital Supervisors.

Bond managers: Capital Supervisors and Loomis Sayles.

The approximate asset mix as of Sept. 30 was 33% stocks, 38% bonds, 15% cash equivalents and 14% mortgages.

Farmers Bank & Capital Trust Co. is the custodian.

Charles L. Bratton is general manager and Bobby L. McKee is operations manager.

Kentucky Teachers' Retirement System

	($ millions)
Total assets	1,325
Pension	1,325
Profit sharing	0
Thrift or savings	0
Employer contributions	105
Benefit payments	123

FRANKFORT, Ky. — Total pension assets of the Kentucky Teachers' Retirement System increased 21% to $1.3 billion as of Sept. 30, from almost $1.1 billion the previous year.

Of that amount, almost $113 million is managed in-house with $97 million invested in fixed-income instruments.

As of Sept. 30, the asset mix was 12% stocks, 67% bonds, 11% cash equivalents, 1% real estate equity and 9% mortgages.

Balanced managers: Todd Investment Advisors and Alliance Capital Management.

Pat N. Miller, executive secretary, and Stuart A. Reagan, investment officer, oversee fund investments.

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Eli Lilly & Co.

	($ millions)
Total assets	800
Pension	510
Profit-sharing	0
Thrift or savings	290
Employer contributions	68
Benefit payments	28

INDIANAPOLIS — Eli Lilly & Co. increased its assets by $195 million in 1983 to $800 million. Of the total, $510 million is in pension assets and $290 million in thrift and savings plan assets.

Equity managers: Batterymarch, Capital Guardian, IDS Advisory, Security Pacific Bank and Trust Co. of the West.

Bond manager: American Fletcher National Bank.

The fund has $50 million in dedicated bond funds and $10 million invested in GICs. The fund also uses venture capital.

The asset mix of the fund is 61% stocks, 25% bonds, 9% cash equivalents and 5% real estate equity.

Northern Trust is master trustee.

Running the pension funds at Eli Lilly are B.J. Miller, manager-employee benefit funds and R.B. Graper, assistant treasurer.

Litton Industries Inc.

	($ millions)
Total assets	803
Pension	803
Profit-sharing	0
Thrift or savings	0
Employer contributions	31
Benefit payments	38

LOS ANGELES — The assets of the Litton Industries pension fund jumped by 38.6% as of Sept. 30, 1983.

The fund manages $191.8 million internally, with $46.1 million in equities, $129.9 million in bonds, and $15.8 million in cash equivalents.

It has $30.7 million invested in GICs, $51.3 million invested internationally and $9.6 million in venture capital.

The asset mix, as of the same date, was 61.8% equities, 24.3% bonds, 8.8% cash equivalents, 3.9% GICs and 1.2% venture capital.

Equity managers: Fred Alger Management, Alliance Capital Management, IDS Advisory, Institutional Capital Corp., Jennison Associates, McKenzie Walker, Pulsifer & Hutner, Provident Investment Counsel, Phillips Hager & North, Robert Fleming, and Wilke International.

GICs: Prudential Insurance.

Chase Manhattan Bank is the master trustee.

George E. Boullianne, vice president and treasurer, and Elizabeth Maes, institutional funds administrator, oversee the fund.

Lockheed Corp.

	($ millions)
Total assets	3,810
Pension	2,813
Profit-sharing	997
Thrift or savings	0
Employer contributions	215
Benefit payments	90

BURBANK — Lockheed Corp. added four investment managers in 1983: Security Pacific Investment Managers, Anhalt/O'Connell, Delaware Investment Advisors and Century Capital Associates.

From June of 1982 to September 1983, Lockheed's employee benefit assets increased more than $1 billion, and it now has 23 investment managers.

Besides the new managers, other managers include: Bankers Trust Co.; Batterymarch Financial Management; Bernstein-Macaulay; C. E. Harris; Chase Investors Management; Citi-Investments; First Interstate Bank of California; First Interstate Bank of Washington; Forstmann-Leff Associates; Lombard Odier International Portfolio Management, Manufacturers Hanover Trust Co.; Mellon Bank; Morgan Guaranty Trust; Royal Trust Co.; Fayez Sarofim Trust; Smith Barney, Harris Upham & Co; TCW Asset Management; Wertheim Asset Management Co.; and Western Asset Management Co.

Master trustee is Bankers Trust. The key person overseeing investment management is George C. Weintz, investment counsel.

Los Angeles City Employees' Retirement System

	($ millions)
Total assets	1,100

Pension funds with GICs

($ millions)

Funds	Assets
1. United Technologies	1,500
2. United Air Lines Inc.	470
3. American Bar Retirement Association	468
4. Southern Baptist Convention	456
5. Detroit Retirement Systems	422
6. Gulf Oil Corp.	349
7. RCA Corp.	325
8. Mobil Oil Corp.	300
9. Marine Engineers Benefit Association	290
10. Dresser Industries	255
11. Consolidated Edison	252
12. General Dynamics	244
13. Sperry Corp.	240
14. Xerox Corp.	225
15. United Presbyterian Church Pension Board	211
16. General Electric Co.	185
17. Operating Engineers, International Union of	184
18. Hercules Inc.	163
19. Trans World Airlines	147
20. International Harvester	146
21. Sun Co.	134
22. Phillips Petroleum Co.	134
23. Philip Morris Inc.	121
24. McDermott International Inc.	120
25. Ashland Oil Inc.	118
26. United Methodist Pension Fund	110
27. Boilermakers, Blacksmiths National Pension Trust	104
28. Delaware State	101
29. Tennessee Valley Authority	101
30. Inland Steel	95
31. International Telephone and Telegraph Corp.	95
32. International Paper Co.	87
33. Public Employees Retirement Association of Colo.	79
34. Halliburton Co.	78
35. National Rural Electric Cooperative Association	70
36. Bethlehem Steel Corp.	69
37. Conoco Inc.	68
38. Martin Marietta Corp.	65
39. North American Philips	65
40. Pacific Gas & Electric	62
41. American Telephone and Telegraph	60
42. Connecticut Retirement Systems	59
[illegible] The Southern Co. System	57
[illegible] Southern California Edison Co.	51
45. Celanese Corp.	50
46. Monsanto Co.	50
47. Shell Pension Trust & Provident Fund	50
48. Texaco Inc.	50
49. FMC Corp.	49
50. American Airlines	45
51. Bakery and Confectionery Union & Industry	45
52. Getty Oil	42
53. Greyhound Corp.	41
54. Manville Corp.	40
55. Aetna Life & Casualty	39
56. Warner-Lambert Co.	38
57. Dow Chemical Co.	35
58. Aluminum Co. of America	34
59. Honeywell Inc.	31
60. Litton Industries Inc.	30
61. Standard Oil Co. (Ohio)	30
62. Armco Inc.	27
63. Raytheon Co.	25
64. Alabama Retirement Systems	20
65. Rohm and Haas Co.	20
66. Florida Power & Light	18
67. Illinois State Universities' Retirement System	18
68. Indiana State Teachers' Retirement Fund	13
69. Army and Air Force Exchange Service	12
70. Eaton Corp.	10
71. Illinois State Board of Investment	10
72. Eli Lilly & Co.	10
73. Los Angeles County Employees	10
74. Montgomery Ward & Co.	10
75. National Steel Corp.	8
76. Teamsters, Central States	5
77. Batus Inc.	4
TOTAL	9,869

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Pension	1,100
Profit-sharing	0
Thrift or savings	0
Employer contributions	62
Benefit payments	75

LOS ANGELES — The Los Angeles City Employees' Retirement System began a bond options program in 1983. Loomis Sayles, one of the fund's fixed-income managers, operates the program for the retirement system. Earl Anschultz, the manager of the retirement system, resigned to become a vice president with Scudder, Stevens & Clark, Los Angeles. His replacement was being sought. In late 1983, the fund also was in the process of seeking one or more additional equity managers.

For the 12-month period ending Sept. 30, 1983, total assets under management increased about 23% to $1.1 billion.

Equity managers: Bankers Trust, Crocker Investment Management Co., CMB Investment Advisors and Loomis Sayles.

Bond managers: Chemical Bank and Loomis Sayles.

The asset mix was 28% stocks, 66% bonds and 6% cash equivalents. Irving Trust is master trustee.

Key personnel in charge of the fund are Jerry Bardwell, assistant manager; Raymond Young, assistant manager; and Oscar Peters, investment officer.

Los Angeles City Fire & Police Pension System

	($ millions)
Total assets	1,382
Pension	1,382
Profit-sharing	0
Thrift or savings	0
Employer contributions	213
Benefit payments	200

LOS ANGELES — The Los Angeles Fire & Police Pension System gave approval to Security Pacific Investment Managers to begin a covered call options program for the system. The option program was "just starting" with SPIM, an existing equity and bond manager for the fund, late in 1983.

SPIM has permission to write covered calls on any of the $280 million in equities it holds in the fund's portfolio. However, SPIM will be very selective.

In addition, the system will allocate $130 million to one or more new equity managers it intends to hire around June of 1984. It is also seeking passage of two city charter amendments. One would allow the system to hire banks, in addition to registered investment counselors, as investment managers, and the second would permit up to 20% of assets to be invested in real estate.

Assets for the system increased about 34% to $1.4 billion for the 12 month period ending Sept. 30, 1983.

Equity managers: Favia, Hill & Associates; Security Pacific Investment Managers; and Wright Investors' Service.

Bond managers: The Boston Co. and Security Pacific Investment Managers.

As of Sept. 30, the approximate asset mix of the system was 52.4% stocks, 34.2% bonds and 13.4% cash equivalents.

Bankers Trust Co. is the master custodian.

Key personnel in charge of the retirement system are Gary Mattingly, general manager; James J. McGuigan, assistant manager-fiscal; and Allan Moore, investment officer.

Los Angeles County Employees Retirement Association

	($ millions)
Total assets	4,000
Pension	4,000
Profit-sharing	0
Thrift or savings	0
Employer contributions	272
Benefit payments	241

LOS ANGELES — In 1983, The Los Angeles County Employees Retirement Association settled a dispute regarding $18 million in county contributions to the retirement fund. In place of the money, the county's supervisors agreed to increase benefits for some 3,600 retired employees.

Equity managers: Capital Guardian Trust and Massachusetts Financial Services.

Bond managers: Brown Brothers Harriman, and CMB Investment Counselors.

Real estate managers: T.L. Karsten & Associates and Scudder Realty Advisors.

As of Sept. 30, 1983, the asset mix was 25% stocks, 59% bonds, 8% cash equivalents, 1% real estate equity and 7% in mortgages. Security Pacific National Bank is the custodian for the fund.

Key personnel in charge of investments are: H.B. Alvord, county treasurer/tax collector; Betty Brewer, investment administration officer and C.L. Spencer, retirement system administrator.

Los Angeles Water and Power Employees' Retirement Plan

	($ millions)
Total assets	754*
Pension	754
Profit-sharing	0
Thrift or savings	0
Employer contributions	90
Benefit payments	67

*As of June 30, 1983

LOS ANGELES — Pension assets at the Los Angeles Department of Water and Power increased by 22% to $753.6 million from last year's total of $618 million.

Balanced managers: Trust Co. of the West and Crocker Investment Management Group.

The approximate asset mix was 23.5% stocks, 60.1% bonds, 6.4% cash equivalents, and 10% mortgages.

Bank of America is the master trustee.

Key investment personnel are: Richard W. Goss, retirement plan manager; Kathleen L. Thornton, assistant retirement plan manager; and Clarence F. Brawn, investment officer.

Louisiana State Employees' Retirement System

	($ millions)
Total assets	1,090
Pension	1,090
Profit-sharing	0
Thrift or savings	0
Employer contributions	106
Benefit payments	123

BATON ROUGE, La. — Louisiana State Employees' Retirement System assets totaled $1.09 billion as of Sept. 30, a 21% increase from the previous year's total of $901 million.

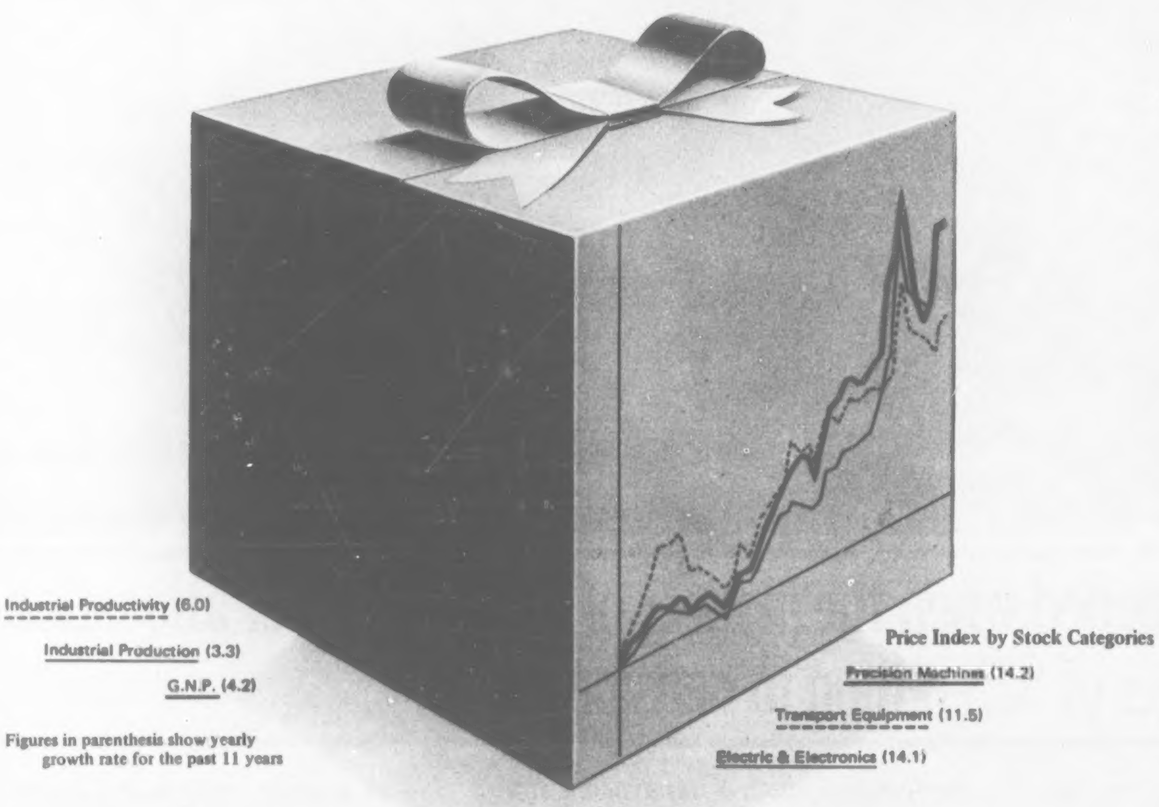
Balanced managers: Hibernia National Bank and Security Pacific Investment Managers.

Real estate investments are managed internally.

The approximate asset mix was 6% stocks, 80% bonds, 12% cash equivalents and 2% mortgages.

The fund manages $160 million

THE JAPAN PACKAGE



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in-house. Of that, short-term investments account for $130 million and fixed income, $30 million. The fund does not use international investments, hedging devices or alternative investments.

Key personnel involved in overseeing the management of the funds are Vernon L. Strickland, director, and Nicholas Montagnino Jr., assistant investment officer.

Louisiana Teachers Retirement System

	($ millions)
Total assets	1,656
Pension	1,656
Profit-sharing	0
Thrift or savings	0
Employer contributions	137
Benefit payments	199

BATON ROUGE, La. — The Louisiana Teachers Retirement System assets grew to $1.656 billion Sept. 30, 1983, from $1.574 billion June 30, 1982.

The asset mix on June 30 was 4% stocks, 79% bonds and 17% cash.

Balanced managers: Massachusetts Financial Services Co., Scudder Stevens & Clark and Hibernia National Bank.

Carleton Page is secretary/treasurer and Jennifer Netterville is investment portfolio specialist.

The LTV Corp.

	($ millions)
Total assets	1,526
Pension	1,359
Profit sharing	167
Thrift or savings	0
Employer contributions	na
Benefit payments	na

DALLAS — Ed Robie, head of investments for The LTV Corp.'s pension fund, resigned after about two years to join Mellon Bank as a fixed-income money manager.

A replacement is expected to be named early this year. Until then, George Simon, director of employee benefit trust administration, is filling in.

In August, LTV contributed about $50 million in cumulative, convertible preferred stock to its pension fund in lieu of cash, its second non-cash contribution in as many years. In November 1982, the company contributed about $25 million worth of bonds, which were sold a few months later.

LTV's employee benefit assets increased about 13% during the year, rising to $1.526 billion as of Sept. 30, compared with $1.204 billion in 1982.

Two managers were dropped in 1983 — IDS Advisory for equities and Prudential for real estate.

Equity managers: Bankers Trust Co., Century Capital Associates, Continental Illinois, Endowment Management & Research, Forstmann-Leff Associates, Franklin Portfolio Management, InterFirst Investment Management, MacKay-Shields Financial Corp., Mellon Bank, Mercantile Securities, National City Bank in Cleveland and Fayez Sarofim & Co.

Bond managers: Manufacturers Hanover and Scudder, Stevens & Clark.

Real estate managers: Equitable Life Assurance and Thomas L. Karsten Associates.

International managers: Fidelity International and Morgan Grenfell.

Mellon Bank is master trustee.

The asset mix as of Sept. 30 was 67% stocks, 19% bonds, 12% cash and 2% real estate.

To have news of personnel changes at your company published, send items to:

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Manville Corp.

	($ millions)
Total assets	691
Pension	677
Profit-sharing	0
Thrift or savings	14
Employer contributions	22
Benefit payments	48

DENVER — As of Sept. 30, 1983, employee benefit assets at Manville Corp. grew 19% to $690 million, up 19% from $580 million the previous year.

During the year Manville rebuffed pressure to terminate its pension plan to recapture an estimated $200 million in excess funding in order to finance abestos claims against the company. How-

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ever, claimants' lawyers still view that as an issue to be negotiated.

Equity managers: Morgan Guaranty; Scudder, Stevens & Clark; MacKay-Shields; and Centerre Trust Co. Special Equity Group Trust.

Bond managers: Morgan Guaranty; Scudder, Stevens & Clark; and Centerre Trust.

Real estate manager: Morgan Guaranty.

GICs: Metropolitan Life.

The approximate asset mix was 57% stocks, 23% bonds, 8% cash equivalents, 2% real estate equity, 3% mortgages and 7% GICs.

The fund has $40 million placed in GICs and $37.3 million invested in foreign markets. Of the latter, $32 million is in equity and $5.3 million is in fixed income.

Harris Bank & Trust Co. is the master trustee.

Key personnel are J.L. Neill, director-trusteed benefits, and T.D. Yates, manager, pension and thrift funds.

Marathon Oil Co.

	($ millions)
Total assets	1,200
Pension	585
Profit-sharing	0
Thrift or savings	615
Employer contributions	54
Benefit payments	50

FINDLAY, Ohio — Marathon Oil Co.'s employee benefit assets grew by 33% and its pension assets by 37.6% for the year ending Sept. 30,1983 .

The savings and employee stock ownership programs grew by 29.5% and kept an approximate asset mix of 63% GICs, 25% bonds, 11% company stock and 1% other equities.

Balanced managers: Boston Co., Chase Investors, Equitable, IDS Advisory, Jennison Associates and Lord, Abbett.

International manager: Chase Investors.

The approximate asset mix for the pension fund was 70% stocks, 10% bonds, 10% cash equivalents and 10% annuities.

Chase Manhattan is the master trustee.

F.E. Braden, manager-benefits funding, oversees the operation of the funds.

Marine Engineers Benefit Association

	($ millions)
Total assets	756
Pension	756
Profit-sharing	0
Thrift or savings	0
Employer contributions	76
Benefit payments	31

BALTIMORE — The Marine Engineers Benefit Association had total employee benefit assets of $756 million as of Sept. 30, 1983. That was a 17% increase from 1982's $643 million total.

About $104 million is managed in-house in short-term securities.

In May of 1983, the MEBA hired an additional U.S. equities manager, Lazard Freres. It also named Kleinwort, Benson International Ltd. of London to manage $40 million in international equities.

Also during 1983, the MEBA used options as a hedging device.

GICs: The Travelers, New York Life and Metropolitan Life.

Equity managers: Bear Stearns & Co., Kleinwort-Benson International Investment and Lazard Freres Asset Management.

Bond managers: Bear Stearns & Co., Kleinwort-Benson and U.S. Trust.

The approximate asset mix was 7% stocks, 20% bonds, 26% cash equivalents, 7% real estate equity, 38% GICs and 2% mortgages.

Mercantile-Safe Deposit & Trust Co. is the master trustee.

Key investment personnel are Lucille Hart, administrator; Gerald Zensky, controller; and Mei Beavers, assistant to controller.

Martin Marietta Corp.

	($ millions)
Total assets	1,300
Pension	1,100
Profit-sharing	0
Thrift or savings	200
Employer contributions	85
Benefit payments	30

BETHESDA, Md. — Martin Marietta Corp. made three contributions of its own stock to the pension fund in lieu of cash during the past year. The total contribution is worth more than $90 million, about 8% of the pension assets. The total assets of employee benefit plans increased by 40.5% during the past year and the assets of the pension plan grew by 41.9%.

Pension assets under in-house management grew by $30 million to $130 million, all of it in fixed-income. GIC investments dropped to $65 million from $125 million.

Van Eck Management Corp. replaced Connecticut General as a stock manager.

Equity managers: Capital Guardian, State Street Research, Pioneering Management, Eberstadt Asset Management, Van Eck and Gregg, McKay, Knight & McKay.

Bond managers: Mellon Financial Services and T. Rowe Price.

Options: Chase Investors, Loomis Sayles and Travelers.

The approximate asset mix was 63% stocks, 28% bonds (including mortgages), 6% cash equivalents and 3% options.

Bankers Trust Co. is the master trustee.

Wayne H. Shaner, assistant treasurer-pension investment, and Shawn M. Hendon, manager-pension investment, are key investment personnel.

Maryland State Retirement & Pension Systems

	($ millions)
Total assets	3,757
Pension	3,757
Profit-sharing	0
Thrift or savings	0
Employer contributions	500
Benefit payments	400

BALTIMORE — Entering 1984, the Maryland State Retirement and Pensions Systems are looking for managers to run $600 million in fixed-income accounts.

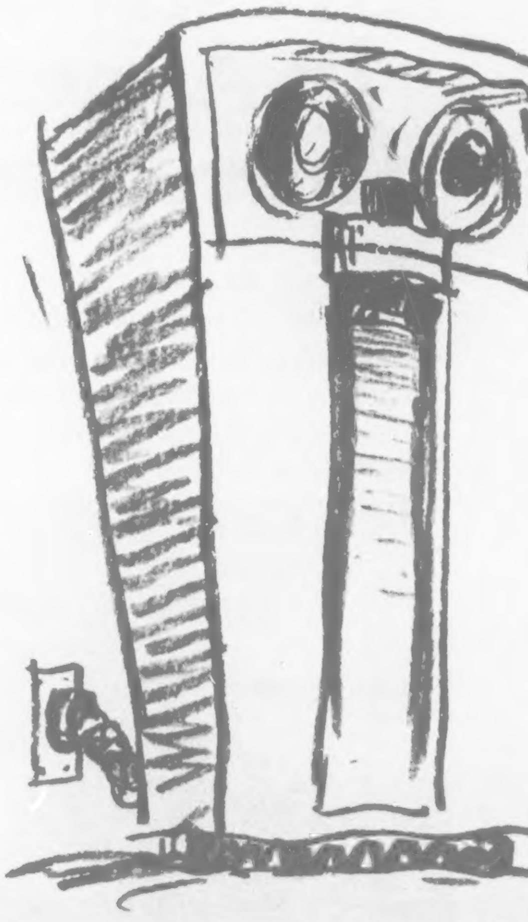
The manager search is another step in the fund's efforts to hire outside managers because of personnel problems.

During the year ending Sept. 30, 1983, the fund hired six managers to run specialty growth accounts.

The fund also hired 10 managers to handle $445 million in large-capitalization equity portfolios.

Separately, an effort to trim back the systems' pension costs by the Maryland Legislature was defeated, but a task force recently issued new recommendations to curb benefits for future participants.

Equity managers: Gregg. McKay; Dimensional Fund Advisors; Hambrecht & Quist; Johnson, Valiant & Broadfoot; Scudder, Stevens & Clark; Wellington Trust Co.; Alliance Capital; State Street Research & Management; Capital Guardian Trust; MacKay-Shields; Loomis, Sayles; Eaton & Howard, Vance Sanders; Investment Advisers; Atlanta Capital Management; Investment Counselors of Maryland; and Hagler, Mas-



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As of Sept. 30, $3 billion of the $3.8 billion fund was managed in-house, with an almost even split between equities and fixed income. Assets rose 30% in the 12-month period to $3.8 billion, up from $2.9 billion.

The asset mix as of that time was 57.8% stocks, 39% bonds, 0.4% cash equivalents, 1% mortgages and 1.8% miscellaneous.

Howard J. France is executive director-investments; Enos T. Throop Jr., director-equities and Arthur M. Lynch Jr., director-fixed income.

Massachusetts State Employees & State Teachers Annuity Funds

	($ millions)
Total assets	2,400
Pension	2,400
Profit-sharing	0
Thrift or savings	0
Employer contributions	125
Benefit payments	345

BOSTON — The Massachusetts State Employees and State Teachers Annuity Funds grew 24% from $1.94 billion recorded in 1982.

The funds are managed entirely in-house; a policy barring investment in any corporation doing business or bank making loans in South Africa is in effect.

The bulk of the funds are invested in fixed-income instruments, either bonds or Government National Mortgage Association pass-through certificates.

The approximate asset mix was 7.5% stocks, 50% bonds, 3% cash equivalents and 39.5% mortgages.

The Employees Annuity Fund uses the Bank of Boston as master custodian. The Teachers Annuity Fund uses State Street Bank as master custodian.

Key personnel are Philip D. Kett, chief investment officer, and Alan R. West, senior investment officer.

McDermott International

	($ millions)
Total assets	945
Pension	770
Profit-sharing	5
Thrift or savings	170
Employer contributions	80
Benefit payments	40

NEW ORLEANS — McDermott International employee benefit assets increased 17.4% to $945 million as of Sept. 30 from 1982's $805 million.

Equity managers: Fayez Sarofim, BEA Associates, Delaware Management, Forstmann-Leff and in-house.

Bond managers: Mellon Bank and in-house.

GICs: Aetna Life.

The approximate asset mix was 17% stocks, 70.3% bonds and 12.7% GICs.

Of the $770 million in pension assets, $650 million was managed in-house, mostly fixed income.

There is $120 million in GICs and $265 million of the pension assets are in dedicated bond funds. International investments, hedging devices or alternative investments are not used.

Northern Trust is master trustee. N.E. Mezey, vice president, oversees the investment management of the funds.

McDonnell Douglas

	($ millions)
Total assets	3,723
Pension	2,902
Profit-sharing	734
Thrift or savings	87
Employer contributions	300
Benefit payments	102

ST. LOUIS — McDonnell Douglas made its first real estate equity investment during 1983, entering Trust Co. of the West's Fund I. The company also terminated Chemical Bank as a bond manager.

Equity managers: Dimensional Fund Advisors; Treynor-Arbit Associates; Aetna Capital Management; and Bankers Trust Co.

Fixed-income managers: Aetna and Centerre Trust.

International manager: Nomura Capital Management

McDonnell Douglas' total employee benefit assets increased 34% to $3.723 billion as of Sept. 30 from $2.778 billion in 1982.

Employer contributions to the pension fund increased to $300 million from $235 million in 1982. The benefits paid by the company to retirees increased to $102 million from $91 million.

A large part of the pension fund was invested in a stock index fund managed by Bankers Trust Co. The company has international investments but did not disclose the amount.

The approximate asset mix was 60% stocks and 40% fixed-income. The fixed-income total includes cash equivalents and real estate.

Bankers Trust is the master trustee.

The company offers a 401(k) savings plan.

Key personnel are David Hammerstein, director-retirement funds management; Sheryl L. Kwiatek, investment analyst; and John W. Chase, corporate assistant treasurer.

Merck & Co.

	($ millions)
Total assets	725
Pension	630
Profit-sharing	0
Thrift or savings	95
Employer contributions	na
Benefit payments	na

RAHWAY, N.J.— As of Sept. 30, 1983, employee benefit assets at Merck & Co. grew 36% to $725 million from $533 million in 1982.

In July the company started a 401(k) plan, which joins an already in place corporate IRA program. Also in 1983, the company allocated $10 million to Morgan Guaranty to invest in oil and gas.

Equity managers: Morgan Guaranty, State Street Research, Brundage, Story & Rose, and Capital Guardian.

Bond managers: Morgan Guaranty.

Real estate managers: Prudential and Morgan Guaranty.

The approximate asset mix was 69% stocks, 19% bonds, 6% cash equivalents, and 6% real estate equity.

Bankers Trust is the master trustee.

Alfred P. Smith, treasurer and vice president; Lee Hale, assistant treasurer; and Susan Y. Chin, director-pension and benefit investments are key investment personnel.

Metropolitan Life Insurance Co.

	($ millions)
Total assets	1,796
Pension	1,796
Profit-sharing	0
Thrift or savings	0
Employer contributions	65
Benefit payments	na

NEW YORK – Metropolitan's own pension assets totaled $1.8 billion

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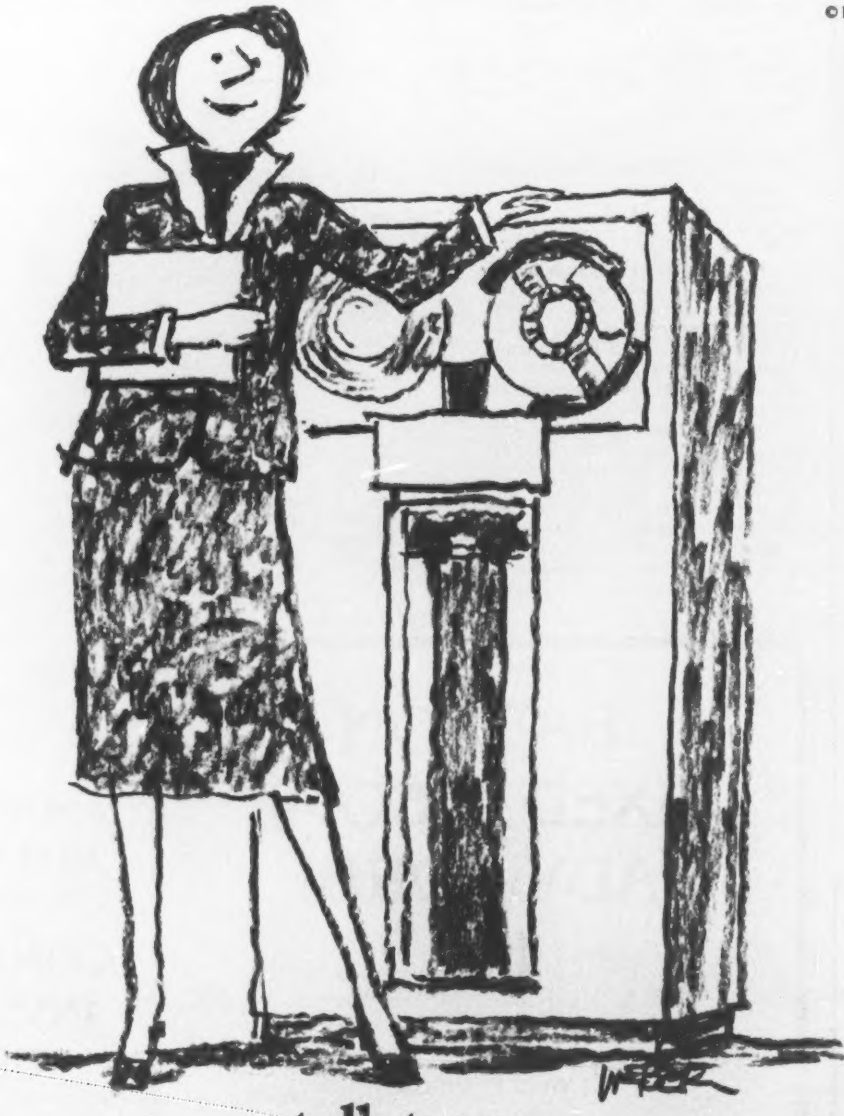

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Bankers Trust
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280 Park Avenue, New York, N.Y. 10017

by Sept. 30, 1983, *Pensions & Investment Age* estimates.

All of the pension assets were internally managed, the company last disclosed in 1982.

Tony Avitabile, manager of benefits planning and development, oversees the funds.

Michigan State Employees Retirement System

	($ millions)
Total assets	8,271
Pension	8,271
Profit-sharing	0
Thrift or savings	0
Employer contributions	1,178
Benefit payments	687

LANSING, Mich. — In the spring, the Michigan State Employees Retirement System committed some $18 million to its first venture capital projects. The fund placed $6.4 million with four venture capital projects: Printek, Neogen, Perceptron and Photon. It promised up to another $12 million in the Michigan Investment Fund LP, which promotes small, in-state companies.

The fund, which is 42.5% invested in bonds and 32.1% in stocks, grew 30.5% to $8.271 billion on Sept. 30 from $6.339 billion a year earlier. Cash constitutes 8.7% of the fund, real estate equity, 0.2% and mortgages, 16.5%.

The plan has no international, oil and gas, passive, futures or options investments.

William A. Amerman is director of investments.

City of Milwaukee

	($ millions)
Total assets	774
Pension	774
Profit-sharing	0
Thrift or savings	0
Employer contributions	34
Benefit payments	2

MILWAUKEE — The Milwaukee City Fund had total assets of $774 million as of Sept. 30, up 26% from 1982.

The entire amount is in pension assets, and the asset mix is 37% stocks, 51% bonds and 12% cash equivalents. The fund has $100.6 million in a dedicated bond fund.

Equity managers: Criterion Investment Management and Loomis-Sayles & Co.

Bond managers: Criterion Investment Management, Loomis-Sayles & Co. and First Wisconsin Trust Co.

Master trustee for the fund is First Wisconsin Trust Co.

Key personnel for the fund include Robert G. Nehls, secretary and executive director, Duamel Vellon, assistant secretary and director, and Christian Foerster, pension accounting specialist.

25 largest pension plans
($ millions)

Rank	Fund/sponsor	Assets
1.	American Telephone and Telegraph	53,930
2.	New York State Common Retirement Fund	20,500
3.	California Public Employees Retirement System	20,438
4.	New York City Employees Retirement Systems	19,676
5.	General Motors Corp.	17,800
6.	New York State Teachers' Retirement System	11,300
7.	California State Teachers' Retirement System	10,500
8.	International Business Machines	10,118
9.	General Electric Co.	9,762
10.	New Jersey Division of Investment	9,032
11.	Teacher Retirement System of Texas	8,612
12.	Michigan State Employees Retirement System	8,271
13.	Ford Motor Co.	7,900
14.	Wisconsin Investment Board	7,900
15.	Ohio Teachers Retirement System	7,810
16.	Ohio Public Employees Retirement System	7,700
17.	U.S. Steel and Carnegie Pension Fund	7,310
18.	North Carolina Retirement System	6,998
19.	E.I. du Pont de Nemours & Co.	6,685
20.	Florida State Board of Administration	6,205
21.	Pennsylvania School Employees Retirement System	5,940
22.	Minnesota State Board of Investment	5,202
23.	Washington State Investment Board	5,000
24.	Teamsters, Central States	4,888
25.	GTE Service Corp.	4,800
	TOTAL	284,184

Minnesota Mining and Manufacturing Co.

	($ millions)
Total assets	1,387
Pension	1,240
Profit-sharing	126
Thrift or savings	21
Employer contributions	90
Benefit payments	16

ST. PAUL, Minn. — Minnesota Mining and Manufacturing Co.'s pension assets increased by 40% in 1983.

3M's was one of nine funds to invest in Forstmann, Little & Co.'s subordinated debt and equity leveraged buy-out fund. It also hired two new real estate advisers: TCW Realty and JMB Institutional Realty. Management Asset Corp. of Westport, Conn., was promoted to full equity manager status.

Equity managers: Alliance Capital Management, Batterymarch, IDS Advisory, Endowment Management and Research, Minnesota Mutual Life, T. Rowe Price and Management Asset.

Bond managers: First Trust Co. of St. Paul, Minnesota Mutual Life, Sun Life, Pacific Investment Management Co. and Hoisington Investment Management Co.

Real estate: Citibank, Equitable Life Assurance Society of the U.S., RREEF, TCW and JMB.

3M has $46.6 million in international equities and uses financial futures. It offers a corporate IRA program and started a 401(k) plan beginning Jan. 1.

The approximate asset mix was 68% stocks, 28% bonds, 3.5% real estate equity and 0.5% mortgages.

First Trust Co. of St. Paul is the master trustee.

H.H. Vernon, assistant treasurer; J.L. Yeomans, manager, pension fund; and R.S. Kang, senior pension fund analyst, oversee operation of the fund.

Master trust directory May 28.

Minnesota State Board of Investment

	($ millions)
Total assets	5,202
Pension	5,202
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

ST. PAUL, Minn. — The Minnesota State Board of Investment hired 15 outside equity managers and put $1 billion in an index fund with Wilshire Associates this year. It also hired State Street Bank & Trust Co., Boston, as a master custodian.

On Sept. 30, the fund had $5.2 billion in assets, an increase of 27% from a year earlier.

Equity managers: Fred Alger, Alliance Capital, Beutel Goodman, BMI Capital, Forstmann-Leff, Hellman Jordan, IDS Advisors, Investment Advisers, Lieber & Co., Loomis Sayles, Norwest Bank, Research Management, Siebel Capital,

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The fund still manages $4.6 billion internally with $2.3 billion in equities, $2 billion in fixed income and $321 million in short-term.

The fund also has some oil and gas investments.

The asset mix on Sept. 30 was 54% stocks, 28% bonds, 8% cash equivalents, 2% real estate equity and 8% mortgages.

Key personnel for the fund include Howard J. Bicker, executive director, and Jeffrey V. Bailey, assistant executive director.

Public Employees Retirement System of Mississippi

	($ millions)
Total assets	1,578
Pension	1,578
Profit-sharing	na
Thrift or savings	na
Employer contributions	130
Benefit payments	90

JACKSON, Miss. — The Public Employees Retirement System hired nine new managers in 1983.

In August, the system took a $1.35 billion chunk of the money it ran in-house and split it among seven bond managers.

Two new equity managers were hired in July: Eaton & Howard, Vance Sanders and INVESCO Capital.

Total fund assets grew 27% in 1983 to $1.6 billion.

Equity managers: Alliance Capital; Eaton & Howard, Vance Sanders; Fayez Sarofim; INVESCO Capital; and Scudder, Stevens & Clark.

Bond managers: Criterion Investment; Dreyfus Management; Lehman Management; Mackay-Shields Financial; Manufacturers Hanover Trust; Pacific Investment; and Wentworth, Hauser & Violich Investment.

The approximate asset mix was 12.9% stocks, 78.5% bonds and 8.6% cash equivalents.

First National Bank of Jackson is master trustee.

Key personnel are Fred Walker, executive secretary; Charles D. Wilkinson, deputy director-investments; and James H. Dunn, investment manager.

Missouri Public School Retirement System

	($ millions)
Total assets	2,072*
Pension	2,072
Profit-sharing	na
Thrift or savings	na
Employer contributions	110
Benefit payments	117

*As of June 30, 1983

JEFFERSON CITY, Mo. — Total assets of the Missouri Public School Retirement System increased 41% during the 12 months ending June 30.

Contributions to the retirement fund were down, to $110 million from $178 million the previous year. Benefits paid out were much higher, $117 million compared with $78 million.

Equity manager: Boatmen's National Bank.

Bond manager: Boatmen's National Bank.

The approximate asset mix was 11% stocks, 70% bonds, 5% cash equivalents and 14% mortgages.

Boatmen's National Bank is the master trustee.

Key personnel are David W. Mustoe, executive secretary, and Joel M. Walters, assistant executive secretary.

Mobil Oil Corp.

	($ millions)
Total assets	3,000
Pension	2,000
Profit-sharing	0
Thrift or savings	1,000
Employer contributions	230
Benefit payments	140

NEW YORK — Mobil Oil Corp. manages $300 million internally, $200 million in fixed income and $100 million in short-term investments.

The $2 billion in pension assets listed is only for the Mobil Oil Retirement Plan. It does not include the assets of Montgomery Ward or Container Corp. of America, two Mobil subsidiaries.

Equity managers: Bankers Trust; Capital Guardian Trust; Chase Investors Management; Citibank; Fayez Sarofim; Putnam Advisory; State Street Research & Management; Stein Roe & Farnham; T. Rowe Price; and Weiss, Peck & Greer.

Bond manager: U.S. Trust Co.

International manager: Morgan Guaranty Trust, through its commingled vehicles.

The pension fund had $200 million in passive bonds, and $300 million in GICs as of Sept. 30. The fund also had $300 million in foreign markets: $200 million in international equities and $100 million in fixed-income.

The fund's approximate asset mix was 50% stocks, 40% bonds and 10% cash equivalents as of Sept. 30.

The company offers a 401(k) plan.

U.S. Trust Co. is the master trustee.

Charles J. Cluna is manager-benefit funds; R.H. Gardner is treasurer; and J.D. Roxe is senior assistant treasurer.

Monsanto Co.

	($ millions)
Total assets	2,125
Pension	1,800
Profit-sharing	na
Thrift or savings	325
Employer contributions	na
Benefit payments	na

ST. LOUIS — Monsanto Co.'s assets were up 18% to $2.1 billion in 1983 from its 1982 figure.

The asset mix of the fund as of Sept. 30 was 67% stocks, 26% bonds and 7% in real estate equity. The fund has $50 million in international investments, all in equities. The fund uses options and financial futures.

Equity managers: David L. Babson; MacKay-Shields; Pioneering Management; T. Rowe Price; Citibank; Delaware Investment Advisers; Eberstadt Asset; Equitable Life; Lord Abbett; Morgan Guaranty; and Putnam Advisory.

Bonds: Brown Bros. Harriman; Fischer, Francis, Trees & Watts; Centerre; and U.S. Trust.

The master trustee is Northern Trust.

The company offers its employees both a 401(k) plan and a corporate IRA program.

Key personnel for the fund include A.E. Wolfarth, assistant treasurer, and R.P. McGahan, manager pension assets.

Montana Board of Investments

	($ millions)
Total assets	682*
Pension	682
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

*As of June 30, 1983

HELENA, Mont. — The Montana Board of Investments' assets grew 18.2% to $682.2 million on June 30, from $577 million a year earlier. The assets, which are managed in-house, are held in stocks, 18.9%, bonds, 80.6% and short-term investments, 0.5%.

Manufacturers Hanover Bank is the fund's master custodian.

James R. Howeth is investment officer; Rodney G. Young is assistant investment officer; and Richard Kain is portfolio manager.

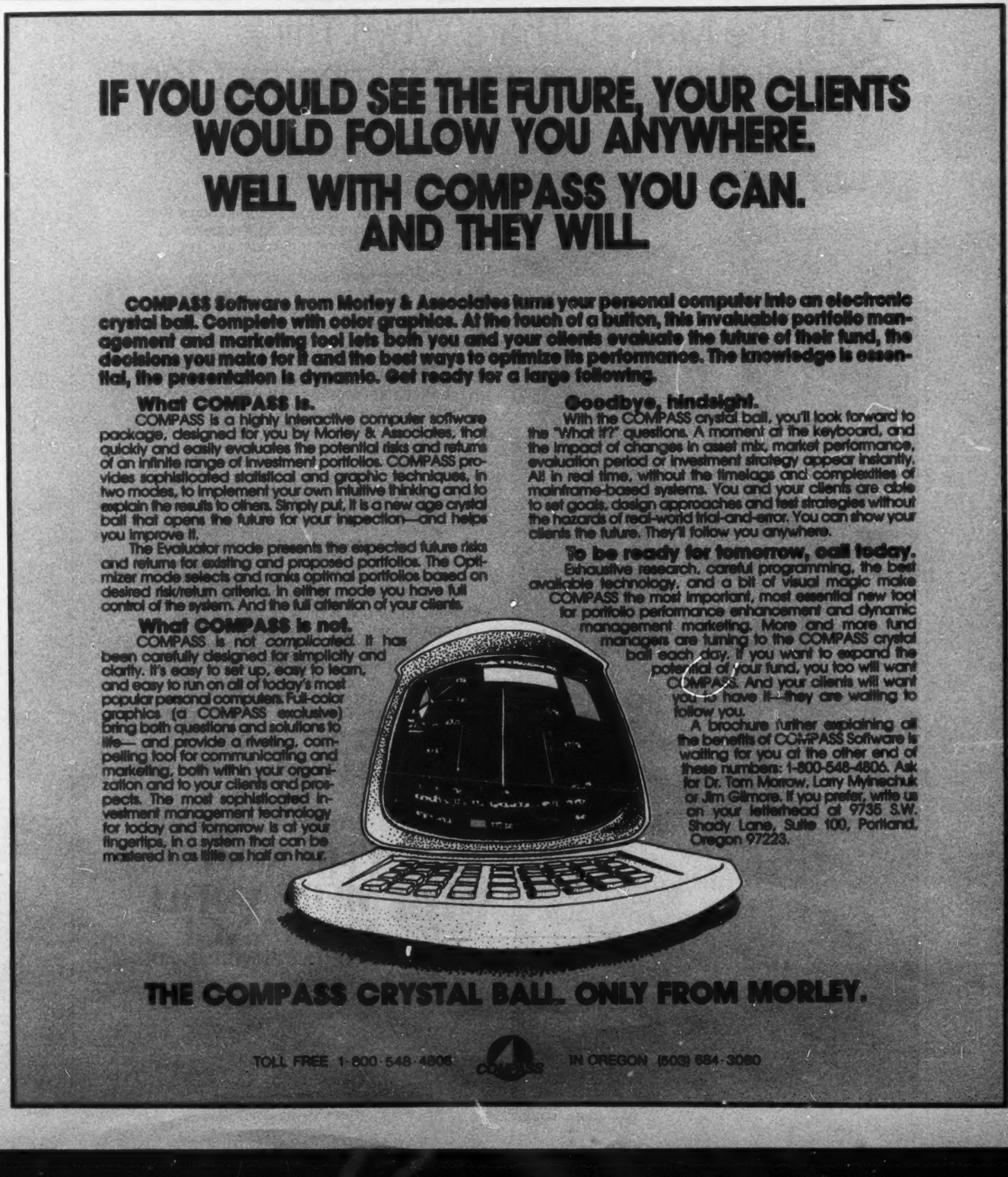
Montgomery Ward & Co.

	($ millions)
Total assets	688
Pension	626
Profit-sharing	62
Thrift or savings	0
Employer contributions	20
Benefit payments	60

NEW YORK — Montgomery Ward & Co., a subsidiary of Mobil Corp., had $688 million in employee benefits as of Sept. 30, 1983.

Equity managers: Stein Roe & Farnham; Weiss, Peck & Greer and T. Rowe Price Associates.

Bond managers: Stein Roe &



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Farnham.

The approximate asset mix was 69% stocks, 29% bonds, and 2% cash equivalents. Montgomery Ward offers a 401(k) plan.

Ann L. Raives, assistant treasurer, and Robert S. Cole Jr., senior pension analyst, are key investment personnel.

n

National Rural Electric Cooperative Association

	($ millions)
Total assets	985
Pension	822
Profit-sharing	0
Thrift or savings	163
Employer contributions	145
Benefit payments	70

WASHINGTON — Pension assets at the National Rural Electric Cooperative Association shot up 44% during the 12-month period ending Sept. 30. Pension assets rose to $822 million from $570 million the year before.

Equity managers: Atlanta Capital; Barrow, Hanley, Mewhinney & Strauss; Capital Guardian; Chesapeake Capital; Liberty Square; Waite & Correnti; and Wilmington Capital.

Bond managers: Lincoln Income; Capital Guardian; and Harris Trust & Savings Bank.

International managers: Morgan Guaranty and Kleinwort Benson International Investment.

GICs: Aetna and Travelers.

The NRECA had $64 million invested internationally as of Sept. 30, with $62 million of that in equities and $2 million in bonds.

Twenty-five percent of its pension assets were managed in-house.

The association has $163 million in thrift plan assets. It also runs an IRA program.

The mix for the pension assets as of Sept. 30 was 59% stocks, 15.5% bonds, 14% cash equivalents, 3% mortgages and 8.5% GICs.

Wachovia Bank & Trust is the master trustee.

Overseeing the fund are Peter Morris, manager-investment division; Tom Sowanick, fixed-income portfolio manager; and Joel Oppenheim, senior equity portfolio manager.

National Steel Corp.

	($ millions)
Total assets	1,027
Pension	943
Profit-sharing	0
Thrift or savings	84
Employer contributions	116
Benefit payments	100

PITTSBURGH — Employee benefit assets totaled $1.027 billion as of Sept. 30, an increase of 24% from 1982's $828 million total.

In 1983, employees at National Steel's plant in Weirton, Pa., approved an employee buy-out agreement to purchase the plant. The sale includes an agreement that National Steel assume responsibility for pension liabilities if the new company fails within five years of the transaction.

Equity managers: Citibank; Dreyfus Management; Brokaw Capital; NSR Asset Management; and Value Line Asset Management.

Bond managers: Citibank; Centerre Trust; and Equitable Life.

Real estate managers: Equitable Life; John Hancock and Prudential

The approximate asset mix was 34% stocks, 38% bonds, 19% cash equivalents and 9% real estate equity.

There is $8 million invested in GICs. The fund uses venture capital but not international investments or hedging devices.

The company has a 401(k) plan and a corporate IRA program.

Bankers Trust is the master trustee.

D.W. Gingery, manager-pension fund administration, oversees the investment management of the funds.

Nevada Public Employees Retirement System

	($ millions)
Total assets	1,200
Pension	1,200
Profit-sharing	0
Thrift or savings	0
Employer contributions	111
Benefit payments	47

CARSON CITY, Nev. — Total assets of the Nevada Public Employees Retirement System increased by 54%, to $1.2 billion on Sept. 30, 1983, from $777 million on June 30, 1982.

The large percentage increase is not only because of the difference in reporting periods, but also because 1982 figures reflect reported book value of total assets while 1983 figures represent the market value of all employee benefit assets.

Further, a fund official said, total assets saw an increase of $80 million from dividends and investment income during the year.

About $170 million in real estate investments or 15% of total assets, is managed internally.

Manager: Criterion Investment Management, formerly Funds Advisory Co. of Houston.

A decision on diversifying investment styles with additional external managers will be made in February 1984.

The approximate asset mix was 17% stocks, 68% bonds and 15% real estate equity.

Nevada National Bank is the master trustee.

Key pension investment personnel include Will Keating, executive officer; Lawrence Grissom, assistant executive officer; Linda Jean Lofgren, investment analyst; and J. Laura Wallace, investment analyst.

New Jersey Division of Investment

	($ millions)
Total assets	9,032 *
Pension	9,032
Profit-sharing	0
Thrift or savings	0
Employer contributions	575
Benefit payments	425

*As of June 30, 1983

TRENTON, N.J. — The pension assets of the New Jersey Division of Investment surged 46.8% in the year ended June 30 to $9.032 billion.

All of the assets are managed internally, and the asset mix as of June 30 was 33% equities, 46% bonds, 9% cash equivalents and 12% mortgages. The fund uses options and has less than 1% of real estate equity.

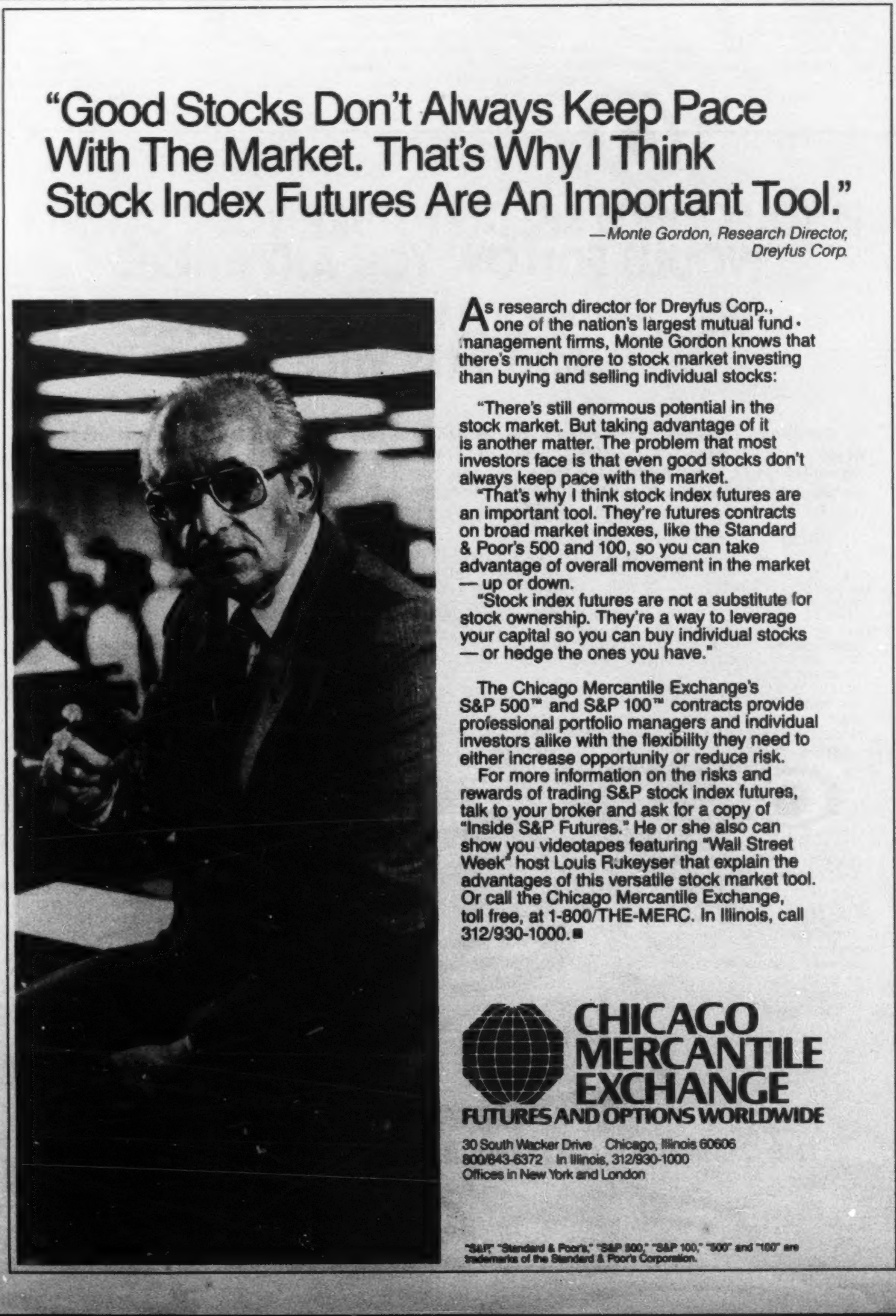
The contributions by the state to the retirement systems are expected to total about $575 million and benefit payments will total about $425 million.

The fund is overseen by Roland Machold, director of the fund, and William Mooney, deputy director.

New Mexico Educational Retirement Board

	($ millions)
Total assets	725*
Pension	725
Profit-sharing	0
Thrift or savings	0
Employer contributions	49
Benefit payments	39

*As of June 30, 1983



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SANTA FE, N.M. — The New Mexico Educational Retirement Board's employee benefit assets totaled $725 million as of June 30. Employee benefits rose about 34.2% from the 1982 figure.

All employee benefit assets are managed in-house.

The approximate asset mix was 82% stocks, 9% bonds and 9% cash equivalents.

Citibank, in conjunction with the State of New Mexico Treasury, is custodian for the funds.

Frank Ready is director of the pension fund and Robert Short is investment manager.

New Mexico Public Employees Retirement Association

	($ millions)
Total assets	670
Pension	670
Profit-sharing	0
Thrift or savings	0
Employer contributions	90
Benefit payments	27

SANTA FE, N.M. — The New Mexico Public Employees Retirement Association had assets of $670 million as of Sept. 30.

Equity manager: Fiduciary Trust Co.

The sponsor manages $78,659 million internally.

The asset mix of the pension assets as of Sept. 30, was 30% stocks and 70% bonds.

Leonard T. Valdes is executive secretary of the fund.

New York City Employees Retirement Systems

	($ millions)
Total assets	19,676 *
Pension	19,676
Profit-sharing	0
Thrift or savings	0
Employer contributions	2,112
Benefit payments	1,868

*As of June 30

NEW YORK — The assets of the New York City Employees Retirement Systems increased by 23.3% to $19.6 billion as of June 30.

The asset mix of the fund at that time was 35% equities, 52% bonds, 12% cash equivalents and 1% mortgages. It does not use international, venture capital or other alternative investments.

The fund manages $4.4 billion internally. Of this, $2 billion is in fixed income and $2.4 billion is in cash equivalents.

About $2.5 billion is in an index fund with Bankers Trust.

The comptrollers' office manages part of the New York City Teachers Retirement System, but the $2.6 billion variable annuity fund is managed independently by managers selected by that fund.

Equity managers: Alliance Capital Management; BEA Associates; Eberstadt Asset Management; Forstmann-Leff Associates; McKay-Shields; Oppenheimer Capital Corp.; and Scudder Stevens & Clark.

Bond managers: Chemical Bank; Citibank; Fiduciary Trust; and Lehman Management.

Citibank is the master custodian for the system.

Managers (for the teachers' fund): Alliance Capital; Bankers Trust; Batterymarch Financial Management; BMI Capital Corp.; GeoCapital Investment; Management Asset Corp.; Gregg, McKay, Knight & McKay; McConnell & Miller; Prudential; Scudder, Stevens; Treynor, Arbit; Value Line Asset Management; Wells Fargo; and William D. Witter & Co.

William Badger, third deputy comptroller, and John Byrnes and May Mahr, senior investment analysts, oversee the city funds.

Wally Sullivan, executive director, and Patrick Kiernan, assistant executive director, oversee the teachers variable annuity fund.

New York Life Insurance

	($ millions)
Total assets	997
Pension	938
Profit-sharing	43
Thrift or savings	16
Employer contributions	12
Benefit payments	29

NEW YORK — As of Sept. 30, *Pensions & Investment Age* estimates the employee benefit assets of New York Life totaled $997.5 million. The assets, all of which are managed internally, had totaled $941 million as of Dec. 31, 1982.

Group annuity contracts held by the company in a general account comprise 97% of the assets; the remaining 3% of the assets was in equity real estate.

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There is a corporate IRA program and, on Jan. 1, a new progress-sharing investment trust was introduced.

Trustees of benefit plans are the master trustee.

Key personnel are Donald K. Ross, chairman; Jacob B. Underhill, president; and George A.W. Bundschuh, executive vice president.

New York State Common Retirement Fund

	($ millions)
Total assets	20,500
Pension	20,500
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

ALBANY, N.Y. — The New York State Common Retirement Fund increased its total pension assets 21% to $20.5 billion as of Sept. 30, 1983, from $16.9 billion the previous year. In 1983 the pension fund committed $25 million to Goldman Sach's real estate equity fund. Near the end of the year, the state fund pledged $48 million to venture capital investments, earmarking $25 million for business opportunities in New York State.

Equity managers: Alliance Capital Management; Bank of New York; Chemical Bank (Favia, Hill & Associates), J. & W. Seligman, Lazard Freres, Morgan Guaranty, Oppenheimer Capital Corp., L.F. Rothschild, Unterberg, Towbin and Shearson/American Express.

The fund internally manages $17.2 billion, of which $3.5 billion is in two stock index funds. The in-house staff invests more than half the $20.5 billion total in fixed-income securities, including government and corporate bonds, mortgage-backed securities and conventional mortgages. Also, about 5.6% of the total is invested in short-term instruments.

The approximate asset mix as of Sept. 30, 1983, was 32% stocks, 43% bonds, 6% cash equivalents, 1% real estate equity, and 18% mortgages.

Chase Manhattan Bank is the master trustee.

Key investment personnel for the fund are Edward V. Regan, New York state comptroller; Suzanne Jaffe, deputy comptroller for investment and cash management; and Raymond Healey, chief investment officer.

New York State Teachers' Retirement System

	($ millions)
Total assets	11,300
Pension	11,300
Profit-sharing	0
Thrift or savings	0
Employer contributions	800
Benefit payments	480

ALBANY, N.Y. — The assets of the New York State Teachers' Retirement System grew by 11.3% in the year ended Sept. 30 to $11.3 billion from $9.9 billion.

Of the system's total assets, $10.7 billion is managed in-house: $4.6 billion in equities; $5.8 billion in fixed income; and $300 million in short-term assets.

Equity managers: In-house, Manufacturers Hanover Trust, Sanford C. Bernstein and Lehman Management.

The fund has $500 million in indexed assets and it uses options and venture capital.

The overall asset mix is 51.3% in fixed income, 46.7% in equities and 2% in cash.

The fund is overseen by Harold N. Langlitz, executive secretary and Edward J. Reno, securities investment officer.

Pension & Investment Age's *international adviser directory will be published June 25.*

North American Philips

	($ millions)
Total assets	686
Pension	609
Profit-sharing	0
Thrift or savings	77
Employer contributions	50
Benefit payments	12

NEW YORK — Employee benefit assets of North American Philips Corp., as of Sept. 30, totaled $686 million, of which $609 million was pension assets and $77 million was in the thrift or savings plan.

Last June, Arthur J. Montegari Jr. joined the fund as director-pension finance and investments.

The company added a 401(k) plan as of Jan. 1, 1984.

About $12 million in indexed funds and $65 million in GICs are under management with an unspecified external manager. The two amounts make up the total $77 million thrift or savings plan assets.

There is a 5% weighting of total assets, or about $34 million, in real estate investments under management with Equitable Life.

Equity managers: Lord, Abbett; State Street Research; and Alliance Capital Management.

Bond managers: Pacific Investment Management and Lincoln Capital in Chicago.

Real estate manager: Equitable Life.

The approximate asset mix was 68% stocks, 27% bonds and cash equivalents and 5% real estate equity.

Bankers Trust is the master trustee.

Mr. Montegari is the person who oversees investment of the fund.

North Carolina Retirement System

	($ millions)
Total assets	6,998*
Pension	6,998
Profit-sharing	0
Thrift or savings	0
Employer contributions	360
Benefit payments	304

*Book value

RALEIGH, N.C. — The North Carolina Retirement System put up $50 million in a $285 million private placement to finance the mortgage of Mellon Bank's new headquarters in Pittsburgh.

The nearly $7 billion fund is internally managed, but does hire a number of money management firms to provide investment advice.

Equity advisers: Alliance Capital; Thorndike, Doran, Paine & Lewis; First Citizens Bank & Trust; First Union National Bank; North Carolina National Bank; and Wachovia Bank & Trust.

Bond adviser: Duff & Phelps (credit analysis only).

The fund uses covered call options.

As of Sept. 30, the fund had $6.9 billion in assets, up from $6 billion a year earlier. The system provides data in book value only.

The asset mix at that time was 20.6% stocks, 77.7% bonds and 1.7% cash equivalents.

Banks of New York is master trustee for bonds and First Union National Bank for equities.

C. Douglas Chappell is deputy treasurer and director-investment and banking division.

Northrop Corp.

	($ millions)
Total assets	1,556
Pension	1,057

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Profit-sharing	499
Thrift or savings	0
Employer contributions	140
Benefit payments	65

NEW YORK — Northrop Corp.'s $1.5 billion pension fund uses no alternative investments. Its asset mix as of Sept. 30 was 73% equities, 20% fixed-income and 7% cash equivalents.

Equity managers: Capital Guardian Trust; Forstmann-Leff Associates; Putnam Advisory; Rosenberg Capital Management; Jennison Associates; and State Street Research.

Bond managers: Fischer, Francis Trees & Watts; Jennison Associates; and Capital Corp.

Bankers Trust Co. is the master trustee. Northrop offers a 401(k) plan.

Richard B. Lohrer, treasurer, oversees the fund.

O

Ohio Police and Firemen's Disability and Pension Fund

	($ millions)
Total assets	1,421
Pension	1,421
Profit-sharing	0
Thrift or savings	0
Employer contributions	108
Benefit payments	145

COLUMBUS, Ohio — Employee benefit assets of the Ohio Police and Firemen's Disability Fund increased 15.7% during the year ended Sept. 30, 1983.

The fund chose Duff & Phelps Investment Management and Central National Bank of Cleveland to manage $5 million each in special equities. The funds are to be invested in stocks of Ohio companies only.

Equity managers: Travelers Investment Management; Value Line; Central National Bank; and Duff & Phelps.

Bond managers: In-house.

The approximate asset mix was 19% stocks, 69% bonds and 12% cash equivalents.

Richard F. Thompson, investment manager, and Theodore Hall, assistant investment manager, oversee investment management.

Ohio Public Employees Retirement System

	($ millions)
Total assets	7,700 *
Pension	7,700
Profit-sharing	0
Thrift or savings	0
Employer contributions	535
Benefit payments	465

*As of June 30, 1983

COLUMBUS, Ohio — The $7.7 billion Ohio Public Employees Retirement System had increased its assets by $1.4 billion on June 30, or 18% from a year earlier. The majority of the assets are managed in-house.

Of the $7.6 billion managed in-house, $2 billion are in equities, $5.1 billion are in fixed income and $500 million are in short-term instruments.

Real estate managers: Aetna, CIGNA, Smith Barney and Wachovia Bank & Trust.

Key personnel in the organization include Robert McLaughlin, investment officer, and Dwight Churchill, assistant investment officer.

Ohio School Employees Retirement System

	($ millions)
Total assets	1,301
Pension	1,301
Profit-sharing	0
Thrift or savings	0
Employer contributions	91
Benefit payments	117

COLUMBUS, Ohio — Employee benefit assets of the School Employees Retirement System of Ohio increased 11% during the year ended Sept. 30, 1983.

As of that date, the fund managed more than $1 billion of its assets in-house: $15 million in equity; $790 million in fixed income; $78 million in short-term assets; and $141 million in real estate.

The fund's sole investment manager, on a non-discretionary basis, is Bankers Trust Co.

The approximate asset mix for the entire fund was 22% stocks, 36% bonds, 6% cash equivalents, 11% real estate equity and 25% mortgages.

Key personnel are R. Jack Cooper, assistant director and investment officer; Paul M. Kubinsky, assistant investment officer-equities; and Robert Cowman, assistant investment officer-fixed income.

Ohio Teachers Retirement System

	($ millions)
Total assets	7,810
Pension	7,810
Profit-sharing	0
Thrift or savings	0
Employer contributions	433
Benefit payments	518

COLUMBUS, Ohio — The State Teachers Retirement System of Ohio had assets of $7.8 billion on Sept. 30, a $1.6 billion increase from the previous year.

The fund is internally managed, with Thorndike, Doran, Paine & Lewis as a consultant.

The asset mix for the fund Sept. 30 was 34.7% stocks, 26.8% bonds, 13.2% cash equivalents, 14.4% real estate equity and 10.9% mortgages.

The fund uses options, financial futures and venture capital.

Key personnel involved in the investment management of the Ohio teachers system include Stephen A. Mitchell, director of investments, Robert Leggett, portfolio manager-equities, Stephen Bossu, portfolio manager-fixed income, and Susan Shumaker, manager-real estate.

Oklahoma Teachers Retirement System

	($ millions)
Total assets	990
Pension	990
Profit-sharing	0
Thrift or savings	0
Employer contributions	65
Benefit payments	120

OKLAHOMA CITY — Oklahoma Teachers' employee benefit assets rose 38% as of Sept. 30, to $990 million from 1982's $716 million.

Investment management for most of the fund, previously handled entirely in-house under the investment advice of the First National Bank and Trust Co. of Oklahoma City, was given to outside managers. Only short-term investments remain in-house.

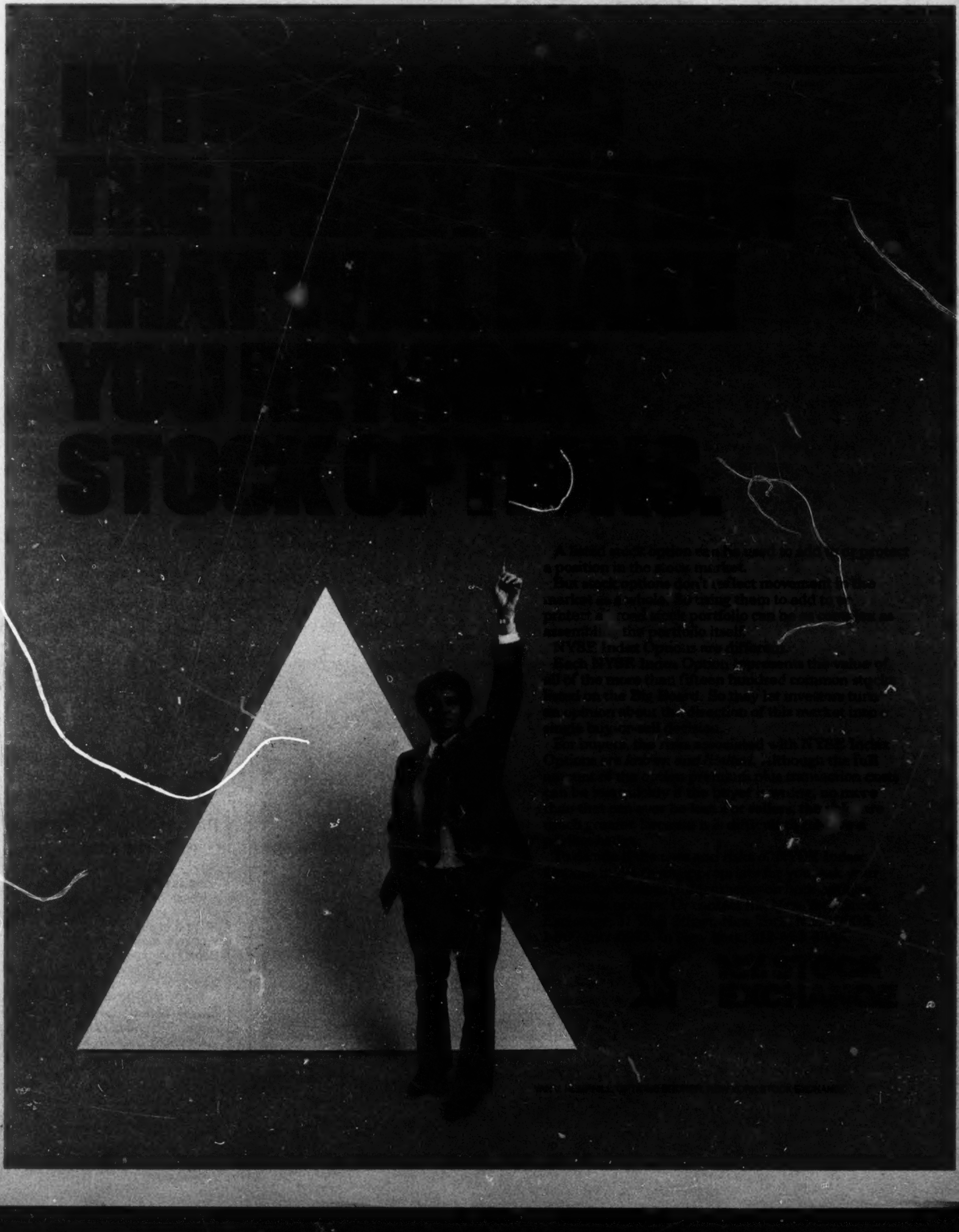
The fund hired three balanced advisers, each managing has one-third of the funds allocated to outside management. It dropped First National Bank and Trust.

Balanced managers: Liberty National Bank and Trust Co. of Oklahoma City; Bank of Oklahoma; and Tom Johnson Investments.

The approximate asset mix was 15% stocks, 75% bonds and 10% cash equivalents.

The fund doesn't use international investments, hedging devices or alternative investments.

Jo Witt oversees the investment management of the fund.



International Union of Operating Engineers

($ millions)

Total assets	944
Pension	944
Profit-sharing	0
Thrift or savings	0
Employer contributions	81
Benefit payments	41

WASHINGTON — The International Union of Operating Engineers' pension assets totaled $943.6 million as of Sept. 30, a 25.5% increase from 1982's total of $752 million.

Equity managers: American National Bank (Chicago); Century Capital Associates; Dimensional Funds Advisors; and Forstmann-Leff Associates.

Bond managers: Criterion Investment Management (formerly Funds Advisory); Lehman Management; Mellon Bank; STW; and Union Labor Life Insurance.

Mortgages: AFL-CIO Housing Investment Trust and Aldrich, Eastman & Waltch.

GICs: Aetna Life; Metropolitan Life; Mutual Benefit Life; Phoenix Mutual; Travelers Insurance; and Union Mutual Life.

The approximate asset mix was 32% stocks, 31.5% bonds, 7% cash equivalents, 10% mortgages and 19.5% GICs.

The fund manages $231.7 million in-house. Of that, $163.5 million was in fixed-income and $68.2 million was in short-term investments. The fund also has $169.6 million indexed, $66.3 million in immunized and dedicated bond funds; and $184 million in GICs. Financial futures also are used.

State Street Bank is the master trustee.

The key person involved in overseeing the fund is Jack E. Johnson, director of finance.

Oregon Public Employees Retirement System

($ millions)

Total assets	3,800
Pension	3,800
Profit sharing	0
Thrift or savings	0
Employer contributions	400
Benefit payments	135

SALEM, Ore. — The Oregon Public Employees Retirement System entered the venture capital and leveraged buy-out arena this year, deciding to place up to $40 million in venture capital funds that invest in the Northwest.

Also, the fund hired a new equity manager — Froley, Revy Investment Co. Inc.

Pension assets climbed about 12% during the past year, to $3.8 million on Sept. 30, from $3.4 million the previous year. The amount managed internally — all in bonds — declined slightly, to $1.8 billion from $2 billion.

Equity managers: Batterymarch; BEA Associates; Columbia Management; Froley, Revy; General American; Glickenhaus; Harris Associates; Hotchkis & Wiley; Quest Advisory; Rosenberg Capital Management; Fayez Sarofim; and William Witter.

Real estate manager: Alex Brown Realty Advisors.

Venture capital: Cable, Howse & Cozadd; Ranier Venture Partners; Menlo Associates; and Northwest Venture.

Leveraged buy-outs: Kohlberg Kravis Roberts & Co.

Master trustee is First Interstate of Oregon.

James C. George, investment manager, and William Unverzagt, senior investment officer, are the key investment personnel.

Owens-Illinois Inc.

($ millions)

Total assets	1,341
Pension	1,214
Profit-sharing	0
Thrift or savings	127
Employer contributions	68
Benefit payments	72

TOLEDO, Ohio — Both Owens-Illinois' pension and total employee benefit assets increased by one-third in 1983.

The plan hired two international managers during the year — Morgan Grenfell and Grantham, Mayo, Van Otterloo — replacing Lazard, Freres & Co., which has abandoned international management. Lazard remains as a domestic equity manager. Also new is Julius Baer for fixed-income and Institutional Petroleum Advisors, which replaced Boston Co. Energy Advisors for oil and gas investing.

Equity managers: Lazard Jennison Associates; Wright Investors; and Dean Witter Intercapital.

Bond managers: Julius Baer; Toledo Trust; Lazard Freres; Boston Co. Institutional Investors; and Harris Trust & Savings.

Real estate managers: RREEF; Aldrich, Eastman & Waltch; American Agriculture; and the Boston Co. Real Estate Counsel.

International managers: Morgan Grenfell and Grantham, Mayo, Van Otterloo.

GICs: Metropolitan Life Insurance Co.

Owens-Illinois runs $38.5 million of its stock portfolio internally. The company has $85.7 million in international markets, of which $71.7 million is stocks and $14 million is bonds. Venture capital stocks make up 0.5% of the portfolio. Owens offers both a 401(k) plan and a corporate IRA program.

The approximate asset mix was 68.2% stocks, 14.3% bonds, 6.5% cash equivalents, 7.7% real estate equity, 2.8% mortgages and 0.5% oil and gas.

Wachovia Bank & Trust is the master trustee.

Key personnel are J.A. Bohland, senior vice president-finance; G.W. Cottrell, treasurer; and R.C. Boller, director-portfolio management and benefit funds.

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Pacific Gas & Electric

($ millions)

Total assets	1,920
Pension	1,383
Profit sharing	0
Thrift or savings	537
Employer contributions	91
Benefit payments	59

SAN FRANCISCO — Pacific Gas & Electric increased its commitment to real estate in early 1983 by committing $20 million to TCW Realty Advisors' first closed-end fund. It also committed between $10 million and $15 million to RREEF Fund West VI, which will start operations in early 1984.

As of Sept. 30, total employee benefit assets increased 28% to almost $1.9 billion from $1.5 billion the previous year. Of the total, almost $1.4 billion is pension assets.

As of the same date, the asset mix of the pension fund was 56% stocks, 10% bonds, 12% cash equivalents, 4% equity real estate, 12% general accounts, 4% GICs and 2% private placements.

PG&E has $62 million invested in GICs.

Equity managers: Barrow, Hanley, Mewhinney & Strauss; Cashman Farrell and Associates; Chase Investors; Eberstadt Asset; Endowment Management & Research; Frontier Capital Management; IDS Advisory Group; Jundt/Capen Associates; MPT Associates; McCowan Associates; Miller, Anderson & Sherrerd; T. Rowe Price; Dodge & Cox.

Bond managers: Fischer, Francis, Trees & Watts; IDS Advisory; T. Rowe Price.

Real estate: Corporate Property Investors; Prudential; TCW Realty; RREEF.

State Street Bank and Trust is master trustee.

Overseeing management of the fund are Stanley T. Skinner, executive vice president and chief financial officer; Gordon R. Smith, vice president-finance and treasurer; and Janice K. Murphy, director-pension fund management.

Pan American World Airways Inc.

($ millions)

Total assets	1,295
Pension	1,295
Profit-sharing	0
Thrift or savings	0
Employer contributions	107
Benefit payments	155

NEW YORK — Pan Am's employee benefit assets, all pension assets, increased 12.8% in the year ended Sept. 30, to $1.3 billion.

During the year, Pan Am was granted a waiver by the IRS to defer $133 million in pension payments that had been due Sept. 15, 1982. It was the second waiver granted the pension plan since 1981.

Beginning last April, the company was required to make monthly contributions of $12 million to an escrow fund to cover its 1982 pension fund contributions.

Pension funds with indexed assets
($ millions)

Funds	Assets
AT&T	8,468
New York City Employees	2,500
California Public Employees	2,000
Maryland State	1,513
Ford Motor Co.	1,300
Washington State Board	1,100
Exxon Corp.	933
Deere & Co.	849
New York State Teachers	500
Pa. State Employees	417
Arizona State System	340
Virginia Supplemental	300
World Bank Staff Retirement	300
IBM	274
Shell Pension Trust	246
Mobil Oil Corp.	200
Trans World Airlines	196
Southern New England Phone	189
Tennessee Valley Authority	183
Allied Corp.	170
Aluminum Co. of America	170
Operating Engineers	169
Phillips Petroleum Co.	164
United Methodist	160
Sperry Corp.	152
Celanese Corp.	150
RCA Corp.	144
Standard Oil Co. (Ind.)	136
United Air Lines Inc.	118
Greyhound Corp.	115
Continental Group Inc.	104
Texaco Inc.	100
United Presbyterian Church	95
Delaware State	92
Florida Power & Light	86
Raytheon Co.	81
Philip Morris Inc.	80
Inland Steel	74
Sun Co.	67
Utah State Systems	59
Kansas Public Employees	50
Citibank	34
Illinois State Universities	31
North American Philips	12
New York State Common	3
TOTAL	24,427

Pan Am added Waite & Correnti as an equity manager. It dropped Morgan Guaranty and Bankers Trust for bonds and scaled down Citibank.

Equity managers: Citibank; Rosenberg Capital Management; Delaware Investment Advisors; Putnam; Batterymarch; John Hancock; Trust Co. of the West; Waite & Correnti; Reich & Tang; Bankers Trust; and Fayez Sarofim.

Bond managers: Putnam Advisory Corp.; Mellon National Bank; Rosenberg Capital Management; and Trust Company of the West.

Real estate manager: Citibank.

The approximate asset mix was 48% stocks, 43% bonds and 9% cash equivalents. Bankers Trust Co. is the master trustee.

Overseeing the fund are Harold N. Friesen, assistant treasurer; Carl F. Stillwell, director-pensions; and Charles P. Dunn, manager-pensions and

J.C. Penney Co.

($ millions)

Total assets	1,663
Pension	705
Profit-sharing	958
Thrift or savings	0
Employer contributions	50
Benefit payments	na

NEW YORK — Employee benefit assets of J.C. Penney Co. increased 38% in the year ended Sept. 30, 1983.

During the year, the fund added Miller, Anderson & Sherrerd as a bond manager. It also hired TCW Realty Advisors for real estate management and Sprout Funds for venture capital.

Equity managers: Rosenberg Capital Management; Batterymarch Financial Management; Torray and Clark; Tallasi Manage-

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ment Co.; and Miller, Anderson & Sherrerd.

Bond managers: Rosenberg Capital Management; and Miller, Anderson & Sherrerd.

Real estate managers: RREEF; and TCW Realty Advisors.

The approximate asset mix was 63% stocks, 10% bonds, 17% cash equivalents, and 10% real estate equity.

State Street Bank & Trust Co. is the master trustee.

Key investment personnel are: Paul F. Hubbard, vice president and treasurer; Don McKay, assistant treasurer; and Victor Bucchere, benefit plans investment manager.

Pennsylvania State Employees

	($ millions)
Total assets	4,159
Pension	4,159
Profit-sharing	0
Thrift or savings	0
Employer contributions	396
Benefit payments	252

HARRISBURG, Pa. — The Pennsylvania Employees Retirement System terminated Mercantile Securities Corp., Dallas, as an equity manager, effective Nov. 30, following the departures of three key investment officers.

The state pension fund had hired Mercantile and three other equity investment managers last spring: Glickenhaus & Co., New York, Trinity Investment Management Corp., Boston, and Trustee & Investors Co., Boston.

Earlier in 1983, the employees retirement system, and its counterpart, the Pennsylvania Public School Employees Retirement System, hired First Pennsylvania Bank to serve as master custodian, the first for the funds.

Total assets of the Pennsylvania employees fund increased 38.3%, to $4.159 billion as of Sept. 30.

Equity managers: Alliance Capital; Glickenhaus & Co.; Mellon Bank; Mercantile Securities; Trinity Investment Management; Trustee & Investor; and Wells Fargo Investment Advisors.

Bond managers: Mellon Bank; Alliance Capital; and Miller Anderson & Sherrerd.

Real estate manager: Aetna Life.

Other managers: Alliance Capital; The Philadelphia Saving Fund Society; Miller, Anderson & Sherrerd; and Mellon Bank.

The state fund invested $417.5 million of its pension assets in stock index funds.

The fund will begin to use options in 1984.

The approximate asset mix as of Sept. 30 was 44.7% stocks, 26.3% bonds, 15.6% cash equivalents, 0.7% real estate equity and 12.7% mortgages.

Edwin B. Warwick is the chief investment officer and Robert I. Cusma is the secretary.

Pennsylvania School Employees Retirement System

	($ millions)
Total assets	5,949
Pension	5,949
Profit-sharing	0
Thrift or savings	0
Employer contributions	541
Benefit payments	583

HARRISBURG — The Pennsylvania school employees fund selected First Pennsylvania Bank as a master custodian, its first, last spring.

Earlier, the fund was among six pension funds to finance One Oxford Centre, a 47-story Pittsburgh office building.

Equity managers: MacKay-Shields; Mellon Bank; Oppenheimer Capital Management; Provident Capital Managment; and State Street Research & Management Co.

Bond managers: Mellon Bank; Loomis, Sayles; Manufacturers Hanover Trust; and Pittsburgh National Bank.

Real estate managers: The Fidelity Bank and Jones Lang Wootton Realty.

Total assets of the school pension fund increased 40.6%, to $5.949 billion between June 30, 1982 and Sept. 30, 1983.

The approximate asset mix as of Sept. 30 was 26.3% stocks, 40.2% bonds, 15.5% cash equivalents, 0.5% real estate equity and 17.5% mortgages.

M. Andrew Sheffler is the executive director; James A. Perry is the assistant executive director; and R.J. McElroy is director, bureau of fiscal control.

The directory of Canadian investment managers will be published July 9.

Philadelphia Municipal Pension Fund

	($ millions)
Total assets	774
Pension	774
Profit-sharing	0
Thrift or savings	0
Employer contributions	141 *
Benefit payments	135 *

*As of June 30, 1983

PHILADELPHIA — The Philadelphia Municipal Pension Fund saw an increase of 24% in total assets to $773.7 million Sept. 30 from $622 million the previous year.

Figures for the total employer contribution to all funds and benefits to retirees, are as of June 30, 1983, the end of the fiscal year. Those saw increases to $141 million from $136 million and to $135 million from $128 million respectively.

About 87% of total assets, or $673 million, is fixed-income managed in-house.

While equities are managed externally.

The fund holds about $70 million or 9% of total assets in pass-through securities.

Equity managers: Batterymarch; Delaware Investment Advisors; Putnam Management; and Miller, Anderson & Sherrerd.

The approximate asset mix was 13% stocks, 72% bonds, 6% cash equivalents and 9% mortgages.

Girard Bank is the master trustee. City Treasurer Gay P. Gervin oversees investment of funds.

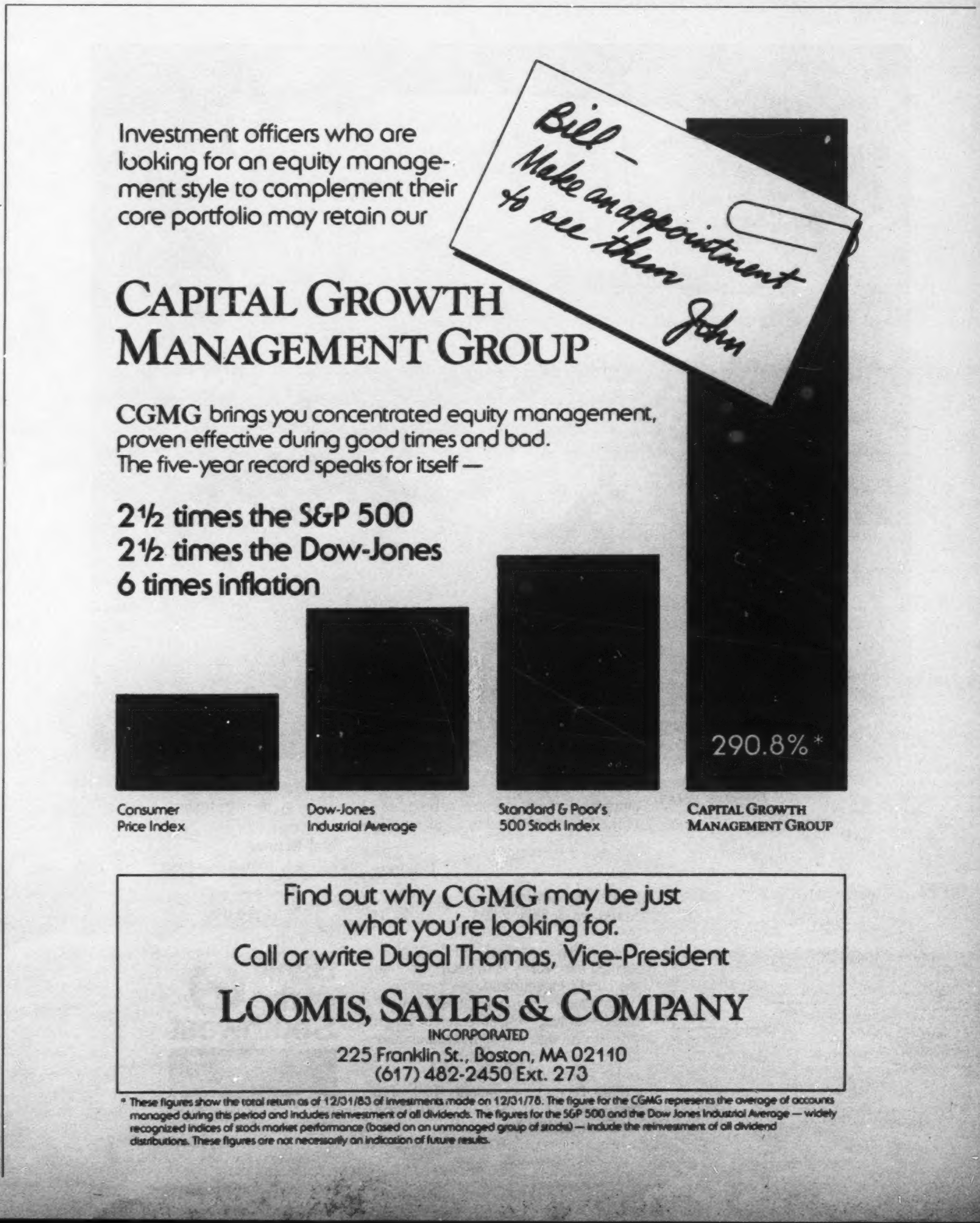
Philip Morris Inc.

	($ millions)
Total assets	839
Pension	571
Profit-sharing	268
Thrift or savings	0
Employer contributions	104
Benefit payments	28

NEW YORK — Philip Morris Inc.'s employee benefit assets grew by 41% and the number of equity managers serving the pension fund increased by 55%.

New to the fund are Rosenberg Capital Management. GeoCapital, Hellman Jordan, Roanoke Asset Management, Siebel Capital Managment and Chemical Bank, which had been advising the firm's $27 million disability plan. Fayez Sarofim & Co. was the only manager let go.

Equity managers: State Street Research & Management; BEA Associates; Bankers Trust; Glickenhaus & Co.; State Street Bank & Trust (index fund); Rosenberg Capital Management; GeoCapital; Hell-



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* These figures show the total return as of 12/31/83 of investments made on 12/31/78. The figure for the CGMG represents the average of accounts managed during this period and includes reinvestment of all dividends. The figures for the S&P 500 and the Dow Jones Industrial Average — widely recognized indices of stock market performance (based on an unmanaged group of stocks) — include the reinvestment of all dividend distributions. These figures are not necessarily an indication of future results.

man Jordan; Roanoke Asset Management; Siebel Capital Managment; and Chemical Bank.

Bond managers: State Street Bank & Trust and Bankers Trust.

Real estate managers: Prudential and JMB Institutional Realty Corp.

Philip Morris has $9 million invested in foreign equity markets.

The approximate asset mix was 54% stocks, 27% bonds, 16% cash equivalents and 3% real estate equity. The firm offers a 401(k) plan, and also has $38 million in an employee stock ownership plan.

State Street Bank of Boston is the master trustee.

Key personnel are Herbert Millington, deputy treasurer; Eric Dalrymple, assistant treasurer; and Joseph Dammann, director.

Phillips Petroleum Co.

	($ millions)
Total assets	1,906
Pension	1,420
Profit sharing	0
Thrift or savings	486
Employer contributions	43
Benefit payments	na

BARTLESVILLE, Okla. — Employee benefit assets at Phillips Petroleum Co. increased 19% during the year ending Sept. 30, to $1.9 billion from $1.6 billion the previous year.

Phillips added two managers during the year: JMB Realty for real estate and Travelers for equities.

Equity managers: Barrow, Hanley, Mewhinney & Strauss; Capital Guardian; Citibank; MacKay-Shields; Morgan Guaranty; Travelers; T. Rowe Price; and Wells Fargo.

Bond managers: Aetna; Equitable; MacKay-Shields; Metropolitan; and Travelers.

Real estate managers: Aetna; JMB Realty; Morgan Guaranty; and Victor Palmieri Co.

Citibank is master trustee.

The asset mix as of Sept. 30 was 68.3% stocks, 24.7% bonds, 2.1% real estate equity and 4.9% mortgages.

Key investment personnel are O.W. Armstrong, vice president-finance; R.E. Bonnell, vice president-treasury and treasurer; C.B. Friley, assistant treasurer; and G.R. Barnett, director-pension investments.

PPG Industries

	($ millions)
Total assets	1,018
Pension	707
Profit-sharing	15
Thrift or savings	296
Employer contributions	60
Benefit payments	45

PITTSBURGH — PPG Industries' total employee benefit assets increased 36% for the year ending Sept. 30, to $1.018 billion from $746 million a year earlier. The big increase occurred in the pension assets, which grew 33% from $531 million to $707 million.

The growth of pension assets paralleled the stock market rise, said Dennis Chipman, director-pension investment.

PPG's pension fund had 65% of its assets invested in stocks during that period. PPG's plan reaped handsome profits when it reduced its stock position from a high of 65% to 45% during the summer of 1983.

Equity managers: BEA Associates; Equitable Life; Lipper Analytical Services; Lowry Raclin Harrell & Howerd; Neuberger & Berman; Prudential; and Smith Barney Harris Upham.

Bond managers: The Boston Co.; Brown Brothers Harriman; Prudential; and Equitable.

PPG's fund uses no alternative or international investments.

The fund invested $248 million in dedicated bond funds.

The approximate asset mix of pension assets as of Sept. 30 was 45% stocks, 35% bonds and 20% cash equivalents.

Mellon Bank is the master trustee.

The company started offering a 401(k) plan on Jan. 1, 1984.

Key personnel are R.W. Leboeuf, treasurer; Mr. Chipman; and John R. Thomas, assistant treasurer, oversee the funds.

Procter & Gamble Co.

	($ millions)
Total assets	1,761
Pension	0
Profit-sharing	1,761
Thrift or savings	0
Employer contributions	134
Benefit payments	79

CINCINNATI — Procter & Gamble's employee benefit assets increased during 1983 to $1.761 billion, according to the 1984 Money Market Directory.

More than 75% of P&G's employee benefit assets are invested in company stock, with the remainder in insurance contracts and bonds. Most of the fund, excluding the insurance contracts, is managed inhouse.

The employee benefit assets are in two major plans, the profit-sharing trust plan, which accounts for about 74% of the assets, and the profit-sharing dividend plan.

Aetna Life & Casualty handles the insurance contracts, while T. Rowe Price Associates manages cash and bonds.

About $4 million is in a separate pension plan for the Folger Coffee Co.

Key investment personnel are E.H. Eaton, treasurer; R.R. Bidwell, assistant treasurer; and J.R. Lawhead, assistant treasurer.

Prudential Insurance

	($ millions)
Total assets	2,654
Pension	2,654
Profit-sharing	0
Thrift or savings	0
Employer contributions	60
Benefit payments	100

NEWARK, N.J. — The total employee benefit assets of Prudential stood at $2.3 billion as of Dec. 31, 1982. *Pensions & Investment Age* estimates the assets had grown to $2.7 billion by Sept. 30.

All of the pension assets are managed internally.

The fund's international investments totaled $83 million, with $77 million in international equities and $6 million in fixed-income investments.

In mid-1983, Richard Klein was elected vice president-equity research in the asset management department.

The 23% weighting of bonds represents a combination of fixed-income securities and mortgages.

The approximate asset mix was 51% stocks, 23% bonds and mortgages, 11% cash equivalents and 15% real estate equity.

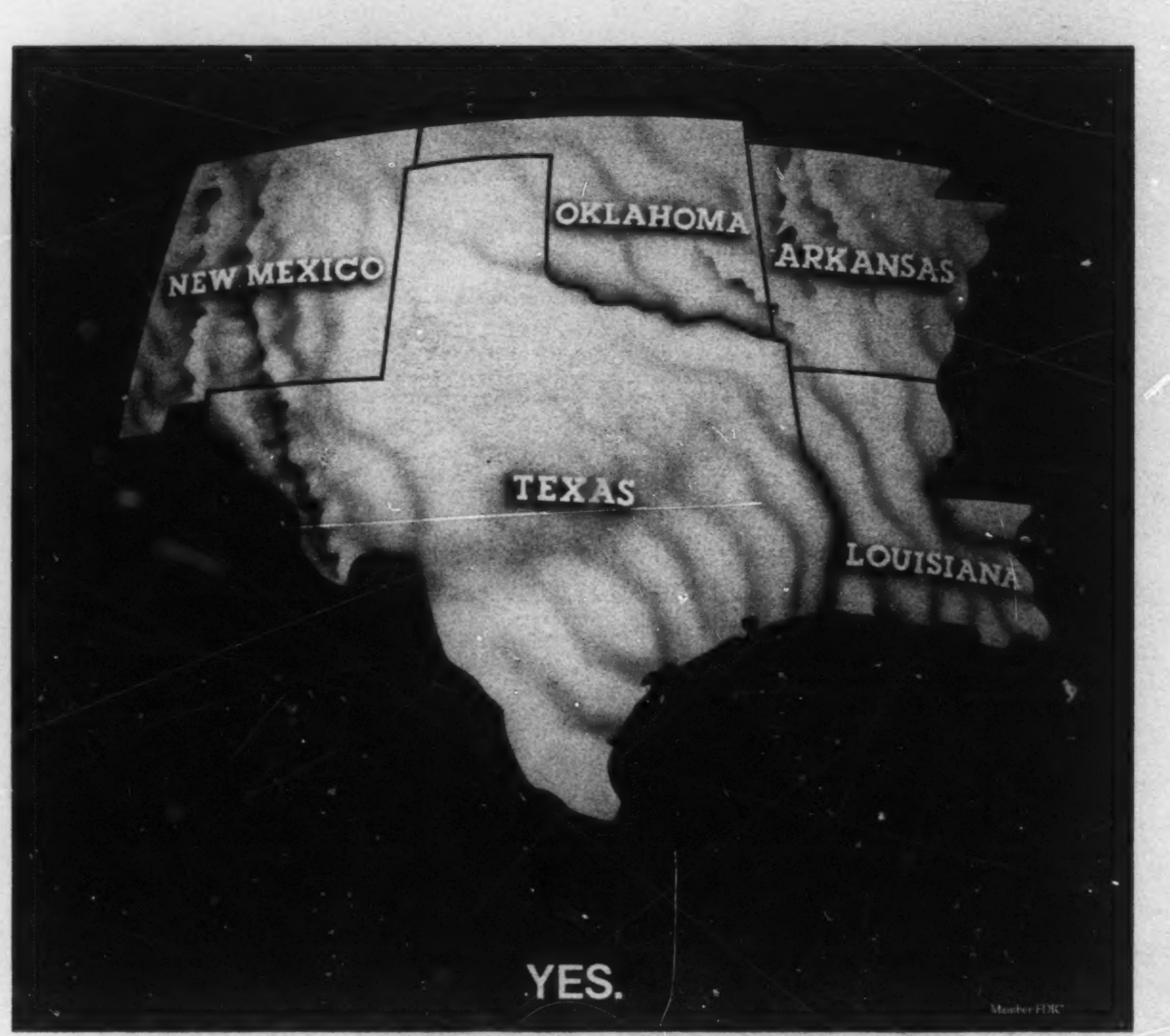
A committee of three senior officers oversees the investment of funds.

r

Raytheon Co.

	($ millions)
Total assets	1,225
Pension	1,200
Profit-sharing	15
Thrift or savings	10
Employer contributions	90
Benefit payments	25

LEXINGTON, Mass. — Raytheon Co. increased its assets to $1.23 billion as of Sept. 30, more than 63% from the 1982 total of $750 million.



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Bank of the Southwest

Of this amount, $65 million is managed internally and $4 million is invested in foreign markets.

Equity managers: Bank of Boston; State Street Research; Batterymarch; Morgan Guaranty; Provident Capital; Wall Patterson McGrew & Hamiton; Fourth National Bank of Wichita; Merchants National Bank of Cedar Rapids; and Massachusetts Mutual Life.

Bond managers: Bank of Boston and Morgan Guaranty.

Real estate managers: Bank of Boston; Morgan Guaranty; John Hancock; and Aetna.

The asset mix of the fund is 60% stocks, 30% bonds, 5% cash equivalents and 5% real estate equity.

The company has both a 401(k) program and a corporate IRA program.

Key investment personnel include Daniel L. Watters, assistant treasurer, and W. Bruce Livingston, manager-employee benefits financing.

RCA Corp.

	($ millions)
Total assets	2,300
Pension	1,900
Profit-sharing	0
Thrift or savings	400
Employer contributions	200
Benefit payments	155

NEW YORK — Pamela W. McCann, former director of pension and employee benefit investmets for NL Industries, joined RCA Corp. this year. Ms. McCann oversees the investment of RCA's $2.3 billion in employee benefit assets. She succeeds Robert D. Isinger, who retired earlier this year as staff vice president-retirement funds and insurance administration.

Total employee benefit assets increased 35% to $2.3 billion as of Sept. 30, 1983, from $1.7 billion.

Equity managers: Batterymarch Financial Management, Chase Manhattan Bank, Eberstadt Asset Management, Endowment Management & Research, Morgan Guaranty Trust Co., T. Rowe Price Associates, Fayez Sarofim & Co., and State Street Research & Management Co.

Bond managers: Scudder Stevens & Clark and State Street Research & Management Co.

Real estate managers: Citibank, Equitable Life, Morgan Guaranty Trust, John Hancock Mutual Life Insurance Co. and Prudential Insurance.

International managers: Fideltiy International Investment Management, N.M. Rothschild International Asset Management in separate accounts and Morgan Guaranty.

The pension fund had $144 million in indexed funds and $325 million in GICs. The fund invested $45 million in foreign stock markets.

On Sept. 30, the approximate asset mix was 50% stocks, 30% bonds, 10% cash equivalents, 8% real estate equity and 2% international.

The company offers a 401(k) savings plan and a corporate IRA program.

The key investment officers are Pamela W. McCann, staff vice president and assistant treasurer, and W. Carl Bullock, director, benefit plan services.

Republic Steel Corp.

	($ millions)
Total assets	1,071*
Pension	949
Profit sharing	0
Thrift or savings	122
Employer contributions	26
Benefit payments	na

*Includes savings plan assets as of June 30, 1983

CLEVELAND — Republic Steel's pension fund made more than $1 million on its sale of 250,000 shares of Republic Steel cumulative convertible preferred stock that had been contributed in late January 1983.

Also, the fund set up a $100 million dedicated bond portfolio in May, to be managed by the company's investment management subsidiary, Western Reserve Capital Management.

The fund also made allocations to two venture capital funds: Warburg Pincus Capital Partners and Mohr Ventures.

Republic Steel's total employee benefit assets as of Sept. 30 increased 3% to $1.07 billion, from $1.05 billion the previous year. Of the total, $949 million is in the pension fund.

Republic Steel manages $620 million internally, with $318 million invested in equities, $212 million in fixed income and $90 million in short-term investments.

Of the pension assets, $96.8 million of its pension assets was invested in an index fund. Republic Steel had $36.2 million invested in

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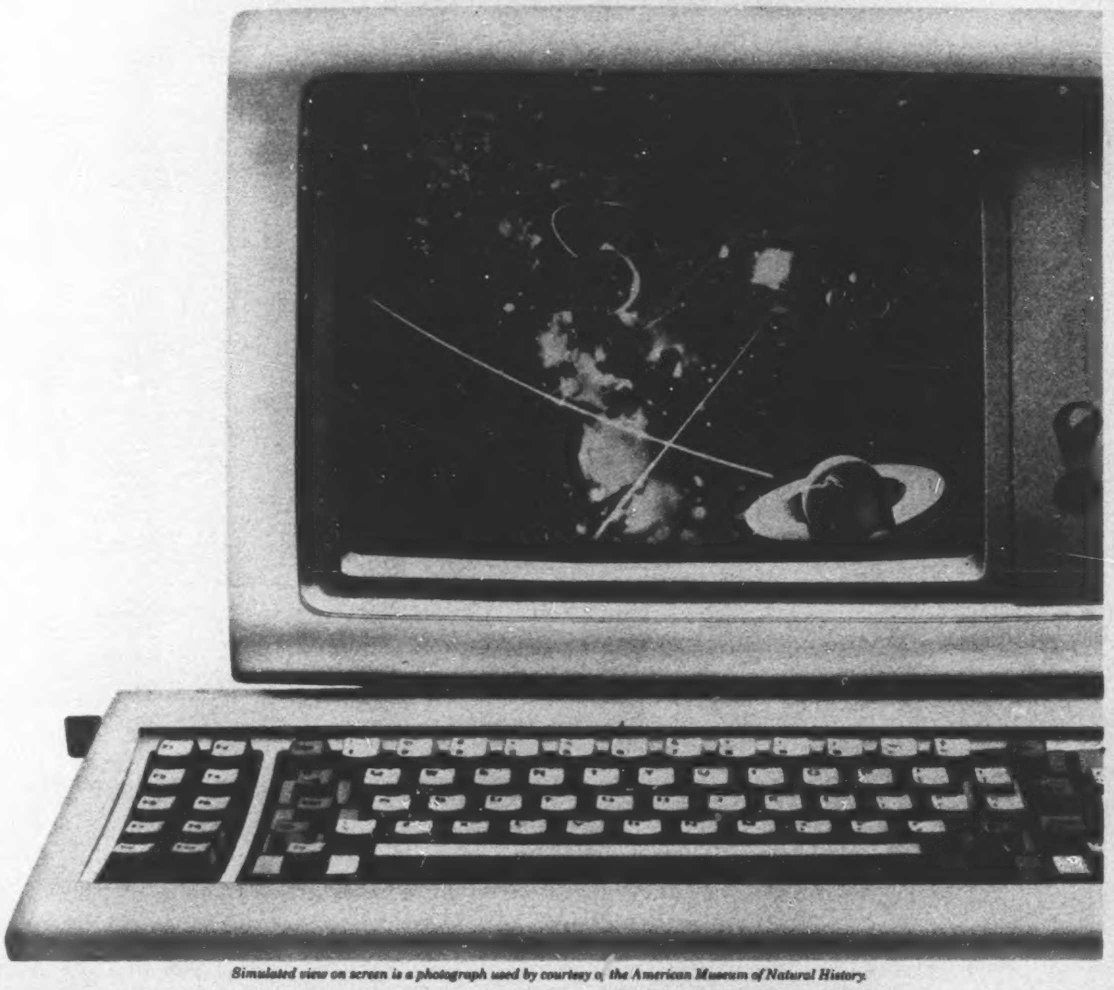

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foreign markets with $9 million in equities and $27.2 million in cash.

Equity managers: Batterymarch; Delaware Investment; Lord Abbett; and Western Reserve Capital (in-house).

Balanced manager: Scudder, Stevens & Clark.

Bond manager: Western Reserve.

Real estate managers: Coldwell Banker and Smith Barney Real Estate Corp.

International manager: Western Reserve.

Venture capital: H&Q Ventures; DSV Partners; Brentwood Associates III and IV; Advanced Technology Associates; Warburg Pincus Capital Partners; Mohr Ventures; and Western Reserve.

As of Sept. 30, the pension asset mix was 60% stocks, 25% bonds, 10% cash equivalents, 2% real estate equity and 3% venture capital.

Chase Manhattan Bank is master trustee.

Key investment personnel are John J. Loftus, vice chairman; Michael E. Shannon, executive vice president and chief financial officer; and Dennis J. Hamilton, director-investments.

R.J. Reynolds Industries

	($ millions)
Total assets	1,514
Pension	1,222
Profit-sharing	0
Thrift or savings	292
Employer contributions	95
Benefit payments	58

WINSTON-SALEM, N.C. — The employee benefits assets of R.J. Reynolds Industries increased by 53%, to $1.5 billion as of Sept. 30, from the 1982 total of $983 million. About $1.2 billion is pension plan assets and $292 million is in a thrift/savings plan.

R.J. Reynolds holds about $307 million in dedicated bond funds as a portion of its total pension funds.

The company has been using financial futures and has invested about 1% of total assets in venture capital investments.

During the past year, R.J. Reynolds added a 401(k) plan and a corporate IRA program.

In May, Michael S. Scheinblum joined the firm as director of asset and risk management in the treasury department.

Equity managers: Batterymarch Financial; Capital Guardian; Delaware Investment; MacKay-Shields; Reich & Tang; Warburg Pincus; Wilkens & Nanovic (savings plan); and Eberstadt Asset Management (savings plan).

Bond managers: Pacific Investment Management; Scudder Stevens & Clark; and Morgan Guaranty.

Real estate manager: Wachovia Bank & Trust.

The approximate asset mix was 60% stocks, 31% bonds, 2% cash equivalents, 4% real estate equity and 3% miscellaneous.

Wachovia Bank & Trust is the master trustee.

Key investment personnel are Gwain H. Gillespie, chief financial officer and senior vice president; John W. Dowdle, treasurer and vice president; and Gene H. Hoots, director-fund management.

Reynolds Metals Co.

	($ millions)
Total assets	859
Pension	787
Profit-sharing	0
Thrift or savings	72
Employer contributions	na
Benefit payments	na

RICHMOND, Va. — Reynolds Metals Co. placed a large portion of its fund in a dedicated bond portfolio with Travelers Investment Management Co.

As of Sept. 30, $355 million in assets, about 41% of the $859 million fund, was dedicated.

The entire fund's assets grew 18% from the $727 million reported in 1982.

As a result of the dedication, Reynolds Metals' stock holdings dropped to 42% from 52% at the same time in 1982. Bonds comprise 44% of the fund; cash, 9%; and real estate equity, 5%. Also, the fund's list of equity managers was narrowed:

Equity managers: Capital Guardian Trust; General American Investors Co.; Quest Advisory Corp.; and Wellington Management Co.

Bond manager: TIMCO.

Balanced managers: Chase Investors Management Corp.; Thompson, Siegel & Walmsley; and Wilmington Capital Management Inc.

Real estate managers: Equitable; Aetna Life & Casualty; and John Hancock.

Richard Turochy is manager-pension financial administration.

Rockwell International

	($ millions)
Total assets	4,282
Pension	4,282
Profit-sharing	0
Thrift or savings	0
Employer contributions	256
Benefit payments	na

PITTSBURGH — Rockwell International's domestic defined benefit pension assets totaled $4.3 billion as of Dec. 31, 198[illegible]. This is an increase of 25% from the $3.4 billion reported in the company's 1982 annual report.

The company contributed $255.5 million to the pension plan in 1983.

The defense contractor refused to provide updated information on its pension-fund investment managers. Chase Manhattan Bank continues to be the master trustee, according to sources.

Key investment personnel are E.W. Alstaetter, staff vice president-insurance and risk management, and Edwin C. McManus, staff vice president-employee benefit programs.

Rohm and Haas Co.

	($ millions)
Total assets	680
Pension	521
Profit-sharing	0
Thrift or savings	159
Employer contributions	35
Benefit payments	20

PHILADELPHIA — As of Sept. 30, employee benefit assets at Rohm and Haas totaled $680 million, a 33.8% increase from 1982's total of $508 million.

During the year, the company added equity managers IntraWest Bank of Denver and Johnson, Valliant & Broadfoot and dropped T. Rowe Price.

Equity managers: Batterymarch; Scudder, Stevens & Clark; Fiduciary Trust; IntraWest Bank of Denver; and Johnson Valliant & Broadfoot.

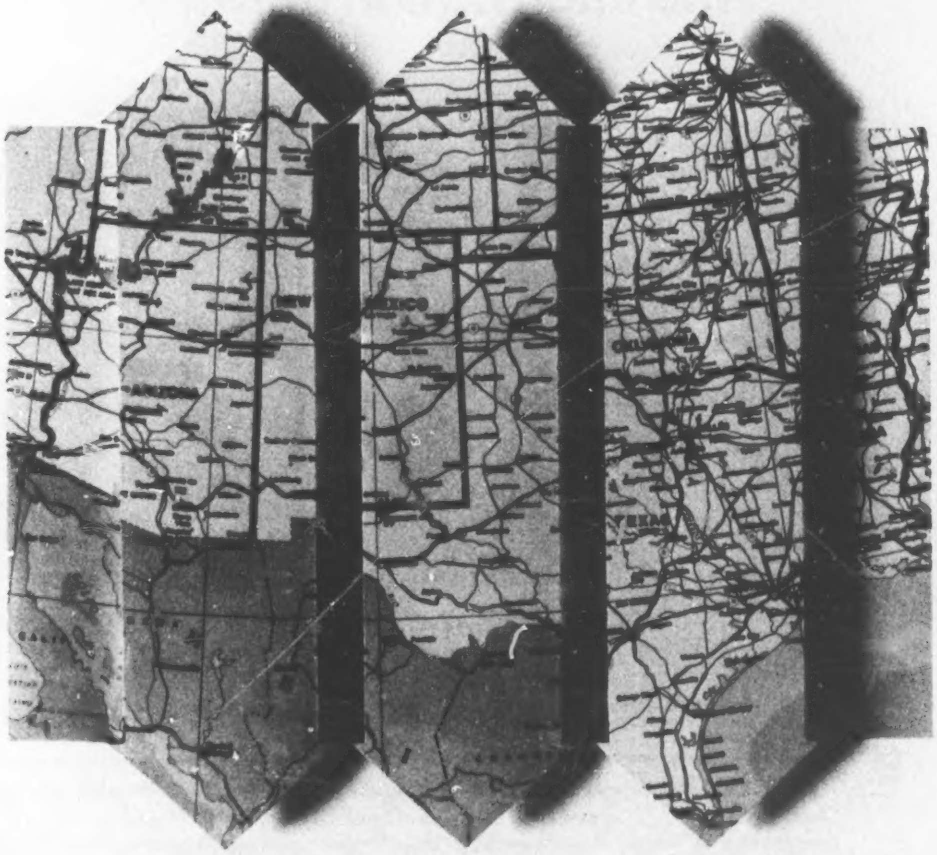
Bond managers: Jennison; Loomis Sayles; Metropolitan Life; and CNA Financial.

Real estate managers: Aetna and Travelers.

The approximate asset mix was 64% stocks, 27% bonds, 6% real estate equity and 3% GICs.

In addition to a corporate IRA program already in place, a new 401(k) plan was introduced Jan. 1, 1984. Citibank is the master trustee.

J. Lawrence Wilson, group vice president, oversees the investment management of the funds.



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Sandia National Laboratories

	($ millions)
Total assets	750
Pension	750
Profit-sharing	0
Thrift or savings	0
Employer contributions	17
Benefit payments	15

ALBUQUERQUE, N.M. — Pension assets at Sandia National Laboratories totaled $750 million as of Sept. 30, an increase of 26% from 1982's figure of $594 million.

Equity managers: Delaware Investment Advisers; Eberstadt Asset Management; Poineering Management; and Putnam Advisory.

Bond manager: Putnam Advisory.

Real estate managers: Equitable Life and Prudential.

The approximate asset mix was 60% stocks, 14% bonds, 6% cash equivalents, 9% real estate equity, 6% mortgages and 5% miscellaneous.

Bradford Trust Co. is the master trustee.

The fund doesn't use hedging devices, alternative or international investments.

The firm offers a corporate IRA program.

Key investment personnel are A. Narath, executive vice president; H.G. Pierce, manager-benefits department; and C.M. Mika, supervisor-benefits planning and pension fund management.

San Francisco City & County Employees' Retirement System

	($ millions)
Total assets	1,640
Pension	1,640
Profit sharing	0
Thrift or savings	0
Employer contributions	185
Benefit payments	130

SAN FRANCISCO — In June, the San Francisco City & County Employees' Retirement System approved a program to invest about $25 million in California residential loans. The loans were packaged in one or more pass-through certificates by the Mortgage Guaranty Insurance Corp. and carry an AA rating from Standard & Poor's Corp.

As of Sept. 30, total assets increased 33% to $1.6 billion from $1.2 billion the previous year.

As of the same date, more than $1 billion of the pension assets was managed in-house, with $5.7 million in equities, $942 million in fixed income and $68 million in short-term. Almost $20 million of that is for forward commitments to fixed income.

Equity managers: Crocker Investment Management Corp.; Loomis Sayles; and Eaton & Howard, Vance Sanders.

Real estate manager: Coldwell Banker Institutional Funds. Crocker National Bank is custodian.

As of Sept. 30, the pension asset mix was about 32.6% stocks, 56.2% bonds, 4.5% cash equivalents, 5.7% real estate equity and 1% mortgages.

Jack E. Stoufer, chief investment officer, oversees investments.

Sears, Roebuck & Co.

	($ millions)
Total assets	5,100
Pension	1,500
Profit-sharing	3,600
Thrift or savings	0
Employer contributions	na
Benefit payments	na

CHICAGO — Sears, Roebuck & Co. had $5.1 billion in employee benefit assets as of Sept. 30.

All assets are managed internally by Sears Investment Management Co.

The asset mix in the pension fund as of Sept. 30 was 50% stocks, 35% bonds, 10% cash equivalents and 5% venture capital. The fund also does options and financial futures, and has $54 million invested internationally.

Continental Illinois National Bank is master trustee.

Key investment personnel are David V. Dootson, president; Paul A. Reese, vice president; and Michael Norton, vice president.

Shell Pension Trust & Provident Fund

	($ millions)
Total assets	3,907
Pension	1,913
Profit sharing	142
Thrift or savings	1,852

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Employer contributions	170
Benefit payments	73

HOUSTON — Shell Oil Co.'s employee benefit funds hired one new investment adviser during 1983 — Criterion Investment Management (formerly Funds Advisory) — and terminated two others — Crocker Investment Management and Scudder, Stevens & Clark.

Assets increased 23%, to $3.9 billion on Sept. 30 from the $3 billion reported in 1982.

Shell increased by almost $300 million the amount managed internally, to $845 million from $550 million in 1982. The fund also increased by more than $100 million the amount it has in index funds, to $246 million from $141 million.

Equity managers: Criterion; Dodge & Cox; Equitable; Fayez Sarofim; First City National Bank of Houston; Kemper Financial; State Street Research; and Wells Fargo.

Bond manager: Texas Commerce Bank.

Real estate managers: Aetna; Equitable; John Hancock; and Prudential.

Options: Analytic Investment Management and Balch, Hardy & Scheinman.

The pension fund's asset mix as of Sept. 30 was 50% stocks, 30% bonds, 12% real estate, 5% mortgages and 3% cash equivalents.

Key investment personnel include R.S. MacIntire, administrator; J.L. Fort, secretary and manager-fixed income; K.T. Ng, manager-equities; and R.J. Stapleton, investment specialist.

Signal Companies Inc.

	($ millions)
Total assets	1,516
Pension	1,016
Profit-sharing	500
Thrift or savings	0
Employer contributions	na
Benefit payments	na

LA JOLLA, Calif. — Total market value of all the Signal Cos.' employee benefit assets grew 37.8% to $1.5 billion as of Sept. 30, 1983 from August 1982.

This year, Signal put 2% of total assets into venture capital and oil and gas investments. Early in 1983, it invested in Trust Co. of the West's oil and gas program that features a commingled debt and an overriding royalty fund.

Changing its interest rate assumption to 7.5% saved Signal $6.9 million in pension expense between 1980 and 1981, and the same higher rate was used in 1982.

Balanced managers: Jennison Associates; Alliance Capital; and Trust Co. of the West.

Equity managers: Fayez Sarofim & Co.; Loomis, Sayles; First Pacific Advisors; Capital Guardian Trust; and CMB Investment Counselors.

Bond managers: Transamerica Investment Services and Fidelity Bank.

Real estate manager: Trust Co. of the West.

The approximate asset mix as of Sept. 30 was 51% stocks, 24% bonds, 22% cash equivalents, 1% real estate equity and 2% in venture capital and oil and gas.

Chase Manhattan Bank is master trustee.

Key investment personnel are Andrew Chitea, senior vice president and chairman of the investment committee, and Walter Sanborn, vice president.

South Carolina Retirement System

	($ millions)
Total assets	2,652
Pension	2,652
Profit-sharing	0
Thrift or savings	0
Employer contributions	160
Benefit payments	123

*As of June 30, 1983

COLUMBIA, S.C. — Total assets for the South Carolina Retirement Systems grew 26% for the year ending June 30.

The majority of the fund is invested in bonds and mortgage-backed securities of the Government National Mortgage Association and Mortgage Guaranty Insurance Corp., a private insurer. There are no equity holdings.

The fixed-income assets are managed in-house, but Jamison, Eaton & Wood acts as adviser.

The fund received $160 million in contributions and paid out $123 million during the year.

The approximate asset mix as of Sept. 30 was 77% bonds, 6% cash equivalents, and 17% mortgage-backed securities.

The state treasurer is the master custodian.

Key personnel are Grady L. Patterson, state treasurer, and Shakun Tahiliani, director of long-term investments.

Southern Baptist Convention

	($ millions)
Total assets	1,155
Pension	1,155
Profit-sharing	0
Thrift or savings	0
Employer contributions	93
Benefit payments	31

DALLAS — The Annuity Board of the Southern Baptist Convention increased its pension assets 22% for the year ending Sept. 30, to $1.155 billion from 1982's $947 million.

The fund added equity managers Alliance Capital Management and J.W. Seligman & Co., and dropped equity manager William W. Lowry.

Equity managers: Alliance Capital; Capital Guardian Trust; Morgan Guaranty; Thorndike, Doran, Paine & Lewis; and J.W. Seligman.

Bond managers: In-house and Morgan Guaranty.

Real estate manager: Gladstone Associates.

GICs: Aetna Life; Travelers; Metropolitan Life; John Hancock; Mutual Benefit Life; and Union Mutual Life.

The approximate asset mix was 25% stocks, 19.7% bonds, 1.5% cash equivalents, 10% real estate equity, 39.5% GICs and 4.4% private placements.

The fund has $456 million in GICs.

Fiduciary Trust Co. is the master trustee.

Key personnel are M.T. York Jr., senior vice president, and Dave L. Borders, vice president.

Pension funds with dedicated assets
($ millions)

Funds	Assets
International Harvester	688
Gulf Oil Corp.	545
Firestone Tire & Rubber	520
Teamsters, Western	513
American Airlines	500
AT&T	493
Reynolds Metals Co.	355
R.J. Reynolds Industries Inc.	306
Ford Motor Co.	300
McDermott International Inc.	265
PPG Industries	248
American Can Co.	208
Honeywell Inc.	170
Hercules Inc.	159
Montgomery Ward & Co.	157
Pan Am World Airways	150
Inland Steel	139
Chrysler Corp.	135
City of Milwaukee	100
Raytheon Co.	99
Republic Steel Corp.	96
Bakery and Confectionary	85
Operating Engineers	66
Dart & Kraft Inc.	65
Boilermakers, Blacksmiths	60
Eli Lilly & Co.	50
Philip Morris Inc.	49
Teamsters, Central States	47
United Technologies	29
Eaton Corp.	20
Texas Instruments Inc.	10
TOTAL	6,628

Southern California Edison Co.

	($ millions)
Total assets	1,017
Pension	685
Profit-sharing	0
Thrift or savings	332
Employer contributions	62
Benefit payments	39

ROSEMEAD, Calif. — Southern California Edison invested almost $39 million in guaranteed investment contracts during the year ending Sept. 30 to meet benefit payments. The company had a total of $51 million in GICs as of that date.

The total employee benefit assets at Southern California Edison reached $1.017 billion on Sept. 30, up 31.5% from $773 million the year before. The asset mix was 71% stocks, 27% bonds, 1% cash and 1% real estate equity. The company uses financial futures.

Equity managers: Batterymarch; Denver Investment Advisors; Eagle Management & Trust; Pacific Mutual Life; Rosenberg Capital Management; Waite & Correnti; and Wentworth, Hauser & Violich.

Bond managers: Pacific Investment Management and Rosenberg.

Real estate manager: Pacific Mutual Realty.

International manager: Batterymarch.

GICs: Connecticut Mutual Life; John Hancock; Massachusetts Mutual Life; and Northwestern National Life.

Security Pacific National Bank is the master trustee.

Michael L. Noel is vice president and treasurer; Linda Faber is assistant treasurer.

The Southern Co. System

	($ millions)
Total assets	1,250*
Pension	932
Profit-sharing	0
Thrift or savings	318
Employer contributions	95
Benefit payments	na

*As of June 30, 1983

ATLANTA — As of June 30, employee benefit assets at The Southern Co. System totaled $1.25 billion, a 50% increase from 1982's $831 million.

Equity managers: Bankers

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Trust; Citizens & Southern National Bank; First Atlanta; AmSouth Bancorporation; and Trust Co. Bank.

Bond managers: Bankers Trust Co.; Citizens & Southern National Bank; First Atlanta; AmSouth Bancorporation; and Trust Co. Bank.

Real estate managers: Citizens & Southern National Bank; First Atlanta; and Trust Co. Bank.

GICs: Aetna; Travelers; MONY; and New England Life.

The approximate asset mix was 53% stocks, 30% bonds, 10% cash equivalents, 1% real estate equity and 6% GICs.

The fund has $57 million placed in GICs and $13 million invested in international equity. It doesn't use hedging devices or alternative investments.

There is a 401(k) plan.

Key personnel are George B. Campbell, financial vice president, and Ormond W. Frazier, assistant treasurer.

Southern New England Telephone Co.

	($ millions)
Total assets	863
Pension	785
Profit-sharing	0
Thrift or savings	78
Employer contributions	55
Benefit payments	34

NEW HAVEN, Conn. — Employee benefit assets at Southern New England Telephone jumped 36% to $863 million for the year ending Sept. 30.

Early in 1983, the fund named Boston Safe Deposit and Trust Co. as its new master trustee replacing Connecticut National Bank.

The fund also restructured the assets under management by Connecticut National Bank, previously a balanced manager for the fund. In order to have greater control over asset allocation, Southern New England has partitioned the equity and bond assets managed by the bank into separate accounts.

Equity managers: Analytic Investment Management; Connecticut National Bank; Capital Guardian Trust; American National Bank of Chicago; Gardner and Preston Moss; and Wells Fargo.

Bond managers: Connecticut National Bank; CIGNA Investment Management; and Equitable Life.

Real estate manager: Prudential.

GICs: Aetna Life and Metropolitan Life.

Analytic Investment Management handles options for the fund. Wells Fargo handles equity management for the savings plan. The saving plan also has $55 million placed in GICs.

Of the pension assets, $189 million was indexed. The fund doesn't use international or alternative investments.

The approximate asset mix of the pension fund was 65% stocks, 28% bonds, 4% cash equivalents and 3% real estate equity. It also has slight investments in mortgages.

Boston Safe Deposit and Trust Co. is the master trustee for the pension assets and Bankers Trust is the master trustee for the savings plan.

Key personnel are Terry O. Oulundsen, secretary and treasurer, and Jean M. LaVecchia, assistant secretary and assistant treasurer.

Sperry Corp.

	($ millions)
Total assets	2,021
Pension	1,461
Profit-sharing	0
Thrift or savings	560
Employer contributions	150
Benefit payments	90

NEW YORK — Sperry Corp. had more than $2 billion in employee benefit assets as of Sept. 30, comprising $1.46 billion in pension assets and $560 million in thrift or savings plan assets.

Balanced managers: Thorndike, Doran, Paine & Lewis; Travelers; and Metropolitan Life.

Sperry manages $700 million inhouse, with $520 million in equities, $100 million in fixed-income and $80 million in short-term.

The fund uses options and has venture capital investments.

The asset mix of the fund as of Sept. 30 was 55% stocks, 12% bonds, 16% cash equivalents and 17% in GICs.

Master trustee for the fund is Chase Manhattan Bank.

Sperry offers both a 401(k) plan and a corporate IRA program.

William Rechter is president of Sperry Capital Management Corp.

Standard Oil Co. of California

	($ millions)
Total assets	2,943
Pension	1,353
Profit-sharing	1,399
Thrift or savings	191
Employer contributions	154
Benefit payments	152

LOS ANGELES — Employee benefit assets at Standard Oil of California totaled $2.9 billion as of Sept. 30, an 11% increase from 1982's $2.6 billion.

During 1983, Crocker Investment Management, previously a balanced manager for the fund, was shifted to only equities, and Fidelity Bank was dropped as a bond manager. New managers were equity managers Sanford C. Bernstein and Provident Investment Counsel.

Balanced manager: Equitable Life.

Equity managers: Crocker Investment; Bankers Trust; Sanford C. Bernstein; Provident Investment; Rosenberg Capital Management; and Stralem & Co.

Bond managers: Harris Trust and Forstmann-Leff-Degnan.

Real estate managers: Crocker Real Estate Equity Fund; Prudential; RREEF; and Travelers.

The approximate asset mix was 63% stocks, 16% bonds, 5% cash equivalents, 13% real estate equity and 3% mortgages.

The fund does not use international investments, hedging devices or alternative investments.

Profit-sharing assets are 100% in company stock. During the year, Standard Oil of California initiated a 401(k) plan.

Bankers Trust is the master trustee.

Key investment personnel are Sellers Stough, vice president-finance; George K. Carter, comptroller; and Robert G. Williamson, assistant comptroller.

Standard Oil Co. (Ind.)

	($ millions)
Total assets	2,985
Pension	1,730
Profit-sharing	140
Thrift or savings	1,115
Employer contributions	200
Benefit payments	300

CHICAGO — Standard Oil Co. (Ind.) hired one manager in 1983, Dimensional Fund Advisors Inc., which manages small-company stocks for the $2.985 billion fund. Total assets on Sept. 30 had grown 28.6% from the $2.320 billion level a year earlier.

The fund's equity holdings were up to 75% from 60% a year earlier. In September, 10% of the fund was in bonds, 10% in cash and 5% in equity real estate.

The fund's activity in international markets grew to $76 million in 1983 from $55 million in 1982. The fund has the bulk of its international assets, $74 billion, in equities and the rest in bonds.

International managers: Fidelity International Investment Man-

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agement Inc. and Ivory & Sime International Inc. Warburg Investment Management International Ltd. was terminated.

Equity managers: Dimensional, Chase Manhattan, CMB Investment Counselors, Forstmann-Leff Associates, Fayez Sarofim & Co., State Street Research & Management and Stein Roe & Farnham.

Bond managers: Hoisington Investment Management and Pacific Investment Management.

Real estate managers: Equitable Life Assurance.

Standard Oil's internally managed assets climbed to $360 million in 1983 from $250 million in 1982. In September, $338 million of that was in equities, $20 million in fixed-income and $2 million in short-term investments.

Chase Manhattan Bank is master trustee. The company offers a 401(k) plan.

Philipp Binzel is general manager and David Tierney is administrative manager of investments.

Standard Oil Co. (Ohio)

	($ millions)
Total assets	1,295
Pension	830
Profit sharing	15
Thrift or savings	450
Employer contributions	90
Benefit payments	60

CLEVELAND — The Standard Oil Co. (Ohio) added five managers after consolidating its pension plan with that of Kennecott Corp., which it acquired in 1981.

Fred Alger Management and United Capital Management were hired for equities; Miller, Anderson & Sherrerd was appointed for bonds; and Smith Barney Real Estate and Trust Co. of the West were appointed for real estate. Bankers Trust was named master trustee.

Chase Manhattan Bank, formerly master trustee, was terminated along with three managers: David L. Babson, Forstmann-Leff-Degnan, and Wertheim Asset Management.

As of Sept. 30, total employee benefit assets for Standard Oil (Ohio) increased 25% to almost $1.3 billion from $1 billion the previous year.

The pension fund had $30 million invested in foreign equities.

The asset mix was 65% stocks, 15% bonds, 13% cash equivalents and 7% real estate equity.

The company started a 401(k) plan in 1983.

Equity managers: Pioneer Group; Jennison; Fred Alger; Investors Research; Bernstein-Macaulay; MacKay-Shields; National City Bank Cleveland; Value Line; Templeton; and United Capital.

Bond managers: Miller, Anderson & Sherrerd; U.S. Trust Co.; Robert C. Brown; and Metropolitan Life.

Real estate managers: First National Bank of Chicago; John Hancock; Smith Barney; and TCW Realty.

Michael Williams, assistant treasurer, oversees the fund investment.

Sun Co.

	($ millions)
Total assets	1,345
Pension	1,119
Profit-sharing	0
Thrift or savings	226
Employer contributions	na
Benefit payments	na

RADNOR, Pa. — Employee benefit assets at the Sun Co. totaled $1.345 billion as of June 30, according to the 1984 Money Market Directory.

Equity managers: Miller, Anderson & Sherrerd; Morgan Guaranty; Wells Fargo; Analytic Investment Management; Bankers Trust; G.T. Capital; Jennison Associates; and MacKay-Shields.

Bond managers: Fischer, Francis, Trees & Watts; Massachusetts Financial Services; and Morgan Guaranty.

Real estate managers: Equitable; Prudential; and Travelers.

International managers: Capital Guardian; Warburg Investment Management International; and Fidelity Investment Management.

GICs: Aetna; John Hancock; Metropolitan Life; New York Life; Travelers; Frank Russell Trust; and Wilmington Trust.

The approximate asset mix, according to the Money Market Directory, was 45% stocks, 11% bonds, 10% cash equivalents, 14% real estate equity, 10% international and 10% GICs.

According to the Money Market Directory, the funds had a $67.25 million indexed and $134.5 million placed in GICs.

Bankers Trust is the master trustee.

William S. Woods Jr, vice president-investments and financing, oversees investment of the fund.

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Teamsters, Central States, Southeast and Southwest Areas Pension Fund

	($ millions)
Total assets	4,886
Pension	4,886
Profit-sharing	0
Thrift or savings	0
Employer contributions	641
Benefit payments	546

CHICAGO — Morgan Stanley Inc. replaced Equitable Life Assurance Society as named fiduciary for the $4.9 billion Teamsters, Central States, Southeast and Southwest Areas Penson Fund. The firm, which will select and oversee managers for the Teamsters fund, also will manage all or a portion of its $1.6 billion equity assets.

The fund's assets grew to $4.9 billion on Sept. 30, more than $1 billion since last year. The asset mix was 34% stocks, 50% bonds, 7% cash, 1% real estate equity and 8% mortgages. It has no alternative investments, but has $907 million in immunized bond portfolios, $47 million in dedicated bond funds and $5 million in GICs.

Equity managers: Equitable, Alliance Capital Management, BEA Associates, Century Capital Associates, Forstmann-Leff Associates, MacKay-Shields Financial, McCowan Associates Inc. and Mercantile Securities.

Bond managers: Equitable, Lincoln Capital Management, Massachusetts Financial Services Co., Mellon Bank, The Putnam Advisory Co. and State Street Bank and Trust.

Real estate managers: Equitable and Victor Palmieri & Co.

State Street Bank and Trust Co. is fund custodian.

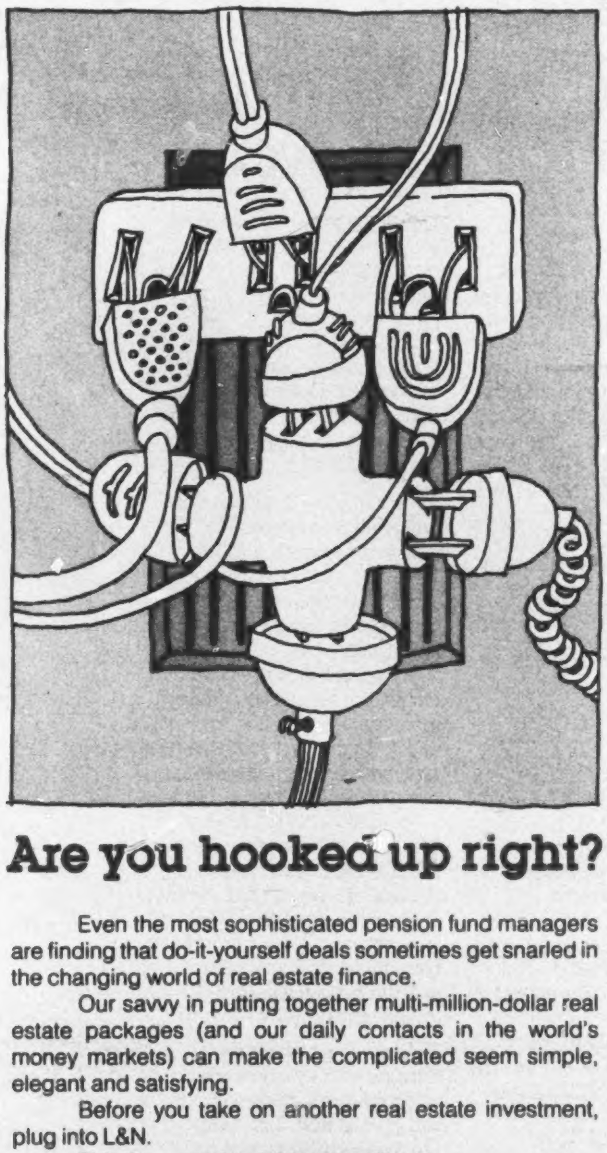
George W. Lehr, executive director, and Robert M. Warner, finance director, are fund trustees.

Teamsters, Western Conference

	($ millions)
Total assets	4,671
Pension	4,671
Profit-sharing	0
Thrift or savings	0
Employer contributions	445
Benefit payments	357

SEATTLE — The Western Conference of Teamsters pension fund assets increased to $4.67 billion, up 22.2% over 1982's total of $3.79 billion.

Equity managers: Prudential, Equitable and Aetna.



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Bond manager: Prudential.

Real estate manager: Prudential.

The approximate asset mix was 18.8% stocks, 60.4% bonds, 10% cash equivalents, and 10.8% real estate equity as of Sept. 30, 1983.

There is $513.3 million in dedicated bond funds.

There are 28 trustees. Joseph Edgar and Owen Bennet are co-chairmen of the trust.

Teledyne Inc.

	($ millions)
Total assets	742
Pension	742
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

LOS ANGELES — As of Sept. 30, *Pensions & Investment Age* estimates that employee benefit assets at Teledyne totaled $742 million.

Teledyne said it had $715.4 million in assets as of Dec. 31, 1982.

All employee benefit assets are managed in-house.

The approximate asset mix as of Sept. 30 was 37% stocks, 54% bonds, 8% cash equivalents and 1% general insurance account.

RepublicBank Dallas is the master trustee.

Key investment personnel are H.E. Singleton, chairman of the board and senior investment officer, and C.E. Rinsen, vice president, secretary and treasurer.

Tenneco Inc.

	($ millions)
Total assets	1,575
Pension	1,012
Profit-sharing	0
Thrift or savings	563
Employer contributions	132
Benefit payments	44

HOUSTON — Tenneco Inc. began actively managing its inhouse assets during 1983, using its investment management subsidiary, Tenneco Asset Management Co.

In the process, three equity managers were dropped — AmeriTrust, Dreyfus and Fidelity.

Employee benefit assets climbed 31% during the past year, from $1.2 billion on Sept. 30, 1982, to $1.575 billion on Sept. 30, 1983.

Tenneco more than doubled the amount of money it manages internally, going from $156 million to $350 million.

Equity managers: Batterymarch, Criterion Investment Management, Delaware Investment Advisors, IDS Advisory Corp. and Tenneco Asset Management Co.

Bond managers: Hoisington Investment Management, RepublicBank Houston, State Street Research, TCW Asset Management, U.S. Trust, Tenneco Asset Management Co.

RepublicBank Dallas is master trustee.

The asset mix as of Sept. 30 was 32% stocks, 45% bonds and 23% cash.

Key investment personnel in the investment management arm are Dan E. Watson, president; Edward L. Jaroski, senior vice president; and Alan M. Stewart, vice president.

Tennessee Consolidated Retirement System

	($ millions)
Total assets	2,967
Pension	2,967
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

NASHVILLE — The Tennessee Consolidated Retirement System had almost $3 billion in employee benefit assets Sept. 30 compared with almost $2.3 billion last year.

All of the fund's assets are managed internally. On Sept. 30, the fund had an asset mix of 30% stocks, 62% bonds, 7% cash equivalents and 1% mortgages. The fund uses options.

The firm offers its employees a corporate IRA program.

Dewey Collins Jr. is chief investment officer of the fund.

Tennessee Valley Authority

	($ millions)
Total assets	1,266
Pension	1,224
Profit-sharing	0
Thrift or savings	42
Employer contributions	69
Benefit payments	54

KNOXVILLE, Tenn. — Total

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employee benefit assets of the Tennessee Valley Authority increased 24.1% to $1.266 billion as of Sept. 30, 1983.

The authority contributed $69 million to all funds in 1983. It paid out $54 million in benefits to retirees.

The authority had $183 million invested in indexed funds and $101 million in GICs.

The approximate asset mix as of the same date was 27% stocks, 52% bonds, 11% cash equivalents, 2% real estate equity and 8% GICs.

Equity managers: Citibank and American National Bank of Chicago.

Bond managers: American National Bank of Chicago, Bank of New York, Citibank, Commerce Union Bank, Park National Bank of Knoxville and Third National Bank.

Real estate managers: Citibank and U.S. Trust.

Eugene Stephens, executive secretary, oversees investments.

Texaco Inc.

	($ millions)
Total assets	1,792
Pension	1,322
Profit-sharing	0
Thrift or savings	470
Employer contributions	123
Benefit payments	200

WHITE PLAINS, N.Y. — Texaco's employee benefit funds totalled $1.717 billion as of Sept. 30, 1982. *Pensions & Investment Age* estimates total assets had grown to $1.792 billion by Sept. 30, 1983. This amounts to a 4.4% increase from the total reported by the company last year. The total comprises approximately $1.322 billion pension assets and approximately $470.3 million thrift or savings plan assets. This indicates pension assets increased 9.9% from the $1.203 billion reported for Dec. 31, 1982.

The company contributed $123 million to the funds in 1983, slightly more than the $115 million it contributed in 1982. It paid out $200 million in benefits to retirees in 1983, four times the $50 million it paid to retirees in 1982.

Texaco uses external investment managers following a specialty/core investment approach implemented November of 1982.

Equity managers: American National Bank & Trust, Equitable Life, Trinity Investment Management, McCowan Associates, Alliance Capital Management, INVESCO Capital Management, MacKay-Shields Financial Management, Gregg McKay, Knight & McKay, Harris Associates, Manufacturers Hanover Trust Co.

Bond manager: Manufacturers Hanover Trust

Real estate managers: Equitable, Travelers, Prudential, Aetna, John Hancock Mutual Life Insurance Co.

Texaco reports that $100 million of its pension assets was in indexed assets. It had $50 million invested in GICs.

The pension fund uses no alternative investments and holds no international securities.

The approximate asset mix as of Sept. 30, 1982, was 22% stocks, 17% bonds, 7% cash equivalents, 4% real estate equity, 46% in Immediate Participation Guarantee contracts and 4% in GICs.

Chase Manhattan Bank is the master trustee.

The company offers a 401(k) savings plan.

J.D. Keough, senior assistant treasurer, and G.L. Mills, manager-benefit plans finance, oversee investments.

Texas Employees Retirement System

	($ millions)
Total assets	2,351
Pension	2,351
Profit sharing	0
Thrift or savings	0
Employer contributions	146
Benefit payments	92

*As of Nov. 30, 1983

AUSTIN, Texas — Assets of the Texas Employees Retirement System were $2.351 billion as of Nov. 30, 1983.

Funds investing in oil and gas

Allied Corp.
AT&T
Atlantic Richfield Co.
Caterpillar Tractor Co.
Celanese Corp.
CIGNA Corp.
Commonwealth Edison Co.
Consolidated Edison
Eastern Air Lines
Episcopal Ministers
Exxon Corp.
Ford Motor Co.
General Electric Co.
General Motors Corp.
GTE Service Corp.
John Hancock Mutual Life
Honeywell Inc.
Hughes Aircraft Co.
International Business Machines
ITT
Manville Corp.
Merck & Co.
Minnesota SBI
Owens-Illinois Inc.
Signal Cos. Inc.
Textron Inc.
United Technologies
Westinghouse Electric
Xerox Corp.

All of the money is invested internally, with the assistance of INVESCO Capital Management and Duff & Phelps.

The asset mix as of Nov. 30 was 19% stocks, 80% bonds and 1% cash.

Clayton Garrison is executive director.

Texas Instruments Inc.

	($ millions)
Total assets	850
Pension	500
Profit-sharing	350
Thrift or savings	0
Employer contributions	40
Benefit payments	10

DALLAS — In late 1983, Texas Instruments Inc. invested in venture capital with Bigler Investment Management Inc. and with Forstmann-Little, which manages leveraged buy-outs.

TI has $850 million in pension fund assets divided among stocks (60%), bonds (15%), cash (20%) and real estate equity (5%).

Dedicated bond funds constitute $10 million of the fund.

Equity managers: Miller, Anderson & Sherrerd; Forstmann-Leff Associates; Herbert R. Smith Inc.; Lieber & Co.; McKenzie Walker; Rogers, Casey, Barksdale Inc. and RepublicBank Dallas.

Bond managers: Citibank and Hoisington Investment Management Co.

Real estate manager: RepublicBank Dallas.

RepublicBank Dallas is master trustee.

The firm offers a 401(k) plan for employees.

William Green is senior investment analyst.

Teacher Retirement System of Texas

	($ millions)
Total assets	8,612
Pension	8,612
Profit sharing	0
Thrift or savings	0
Employer contributions	493
Benefit payments	545

AUSTIN, Texas — Assets of the Teacher Retirement System of Texas increased by more than 17% between 1982 and 1983, to more than $8.6 billion as of Sept. 30, 1983.

The pension fund, the largest public fund in the state, entered the participating mortgage investment arena, hiring six advisers to help the in-house staff make its investment decisions.

The asset mix as of Sept. 30 was 31% stocks, 61% bonds, 4% cash equivalents and 4% mortgages.

Bruce Hineman is executive secretary of the fund; Clark Manning is investment officer.

Textron Inc.

	($ millions)
Total assets	1,113
Pension	803
Profit-sharing	52
Thrift or savings	258
Employer contributions	68
Benefit payments	54

PROVIDENCE, R.I. — Textron Inc.'s employee benefit assets increased to $1.1 billion as of Sept. 30, 1983. Of the total, $803 million was pension assets, $52 million was profit-sharing assets and $258 million was thrift or savings plan assets.

The company contributed an estimated $68 million to all funds in 1983. It paid out an estimated $54 million to retirees during the year.

Textron manages $543 million of its pension assets in-house, with $109 in equities, $353 million in fixed-income and $81 million in short-term. The balance is managed by several banks.

Balanced managers: Chemical Bank, Continental Illinois, First National Bank of Boston, First National Bank of Chicago, Harris Trust and Savings, Hospital Trust Investors, Old Stone Bank, and Royal Trust of Toronto.

The pension fund has 5% of its assets invested in oil and gas.

The pension asset mix as of the same date was 18% stocks, 40% bonds, 15% cash equivalents, 1% real estate equity, 10% mortgages, and 16% private placements.

Textron offers a 401(k) savings plan and a corporate IRA program.

Richard A. Watson, vice president-investment, oversees management of the funds.

Trans World Airlines

	($ millions)
Total assets	1,819
Pension	1,800
Profit-sharing	0
Thrift or savings	19
Employer contributions	68
Benefit payments	50

NEW YORK — Total pension fund assets at Trans World Airlines grew 27% over the year from $1.4 billion listed last year.

According to sources, the company's pension contribution for 1982, not listed in its 1983 profile, was $107 million. This year it was substantially lower, $68 million.

The trustees appointed two new managers for small balanced accounts last summer. They were Estabrook Asset Management and Phelan Capital Management.

Equity managers: American National Bank, Endowment Management & Research, Dreyfus Fund, Equitable Life, Fayez Sarofim, Morgan Guaranty Bank, Putnam Advisory, T. Rowe Price, Scudder, Stevens & Clark, State Street Research, Torray Clark and Vaughan Nelson.

Bond manager: United Missouri Bank.

Balanced managers: Estabrook Asset Management, Fort Hill Investors, McGlinn Investment Services and Phelan Capital Mgt.

Real estate managers: Citibank, Aetna Life Insurance and Coldwell Banker.

GICs: Aetna Life, Equitable Life and New England Life.

International managers: Putnam Advisory and Morgan Guaranty.

The approximate asset mix was 52% stocks, 41% bonds, 6% cash equivalents, and 1% real estate equity as of Sept. 30.

Boston Safe Deposit & Trust Co. is the master trustee.

Key investment personnel are R.A. Peiser, vice president and treasurer; and S.J. Schenck, manager-pension investments.

Travelers Corp.

	($ millions)
Total assets	993
Pension	769
Profit sharing	0
Thrift or savings	224
Employer contributions	65
Benefit payments	28

HARTFORD, Conn. — Employee benefit assets of The Travelers Corp. increased 23% between Sept. 30, 1982 and Sept. 30, 1983, rising to to $993 million from $810 million.

All of the money is managed internally.

The asset mix as of Sept. 30 was 27% stocks, 51% bonds, 15% cash, 5% real estate equity and 2% mortgages.

Key investment personnel include C. Roderick O'Neill, chairman of the finance committee; Kevin J. Bradley, chairman of Travelers Insurance Management Co.; and David M. Dunford, senior vice president of TIMCO.

TRW Inc.

	($ millions)
Total assets	1,239
Pension	1,239
Profit-sharing	0
Thrift or savings	0
Employer contributions	84
Benefit payments	80

CLEVELAND — TRW's employee benefit assets increased almost 41% between Sept. 30, 1982 and Sept. 30, 1983. During the period, assets under in-house management increased 46%, to $223.5 million from $153 million.

On Sept. 30, 1983, TRW also held $343.4 million in an employee stock savings plan, which increased 19.53% over the previous year's total.

During the year, the fund added MacKay-Shields as bond manager and dropped SeaFirst National Bank.

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Equity managers: Alliance Capital, L.F. Rothschild, Endowment Management, Campbell Advisory, Fred Alger and TRW Investment Management (in-house assets).

Bond managers: Pacific Management, MacKay-Shields and Hoisington Investment.

International managers: Ivory & Sime International and Baring International.

The approximate asset mix was 70.1% stocks, 19.6% bonds and 10.3% cash equivalents.

Boston Safe Deposit & Trust Co. is the master trustee.

Edward N. Button, president, TRW Investment Management, a TRW subsidiary, oversees investment management of the fund.

U

Union Carbide Corp.

	($ millions)
Total assets	2,400
Pension	2,400
Profit-sharing	0
Thrift or savings	0
Employer contributions	162
Benefit payments	135

DANBURY, Conn. — Union Carbide's pension assets increased to $2.4 billion as of Sept 30, 1983.

The assets are managed internally with $1.3 billion in equities, $1 billion in fixed-income and $100 millon in short-term.

The asset mix of the fund is 49% stocks, 43% bonds, 5% cash equivalents and 3% real estate equity.

Key investment personnel include James A. O'Connell, assistant treasurer and director pension fund investment services.

Union Oil Co. of California

	($ millions)
Total assets	1,083
Pension	785
Profit-sharing	298
Thrift or savings	0
Employer contributions	75
Benefit payments	47

LOS ANGELES — Union Oil Co. of California's assets grew 19% to $1.1 billion, as of Sept. 30, 1983, from $911 million in 1982. Its asset mix was 46% stocks, 5% bonds, 12% cash, 5% real estate equity, 27% insurance company general accounts and 5% other investments. Also, the company owes the fund 5% of the $1.1 billion which cannot be invested.

The fund invests in oil and gas and overseas equities, but would not disclose the amount.

Equity managers: Delaware Investment Advisers, Dreyfus Management, Lincoln Capital Managemet, Stralem & Co., IDS Advisory; Hellman Jordan Management Inc. and Siebel Capital.

Bond managers: Hoisington Investment Management Co. and Fidelity Bank.

Real estate managers: Aetna Life Insurance, The First National Bank of Chicago, Equitable Life Assurance Society and Prudential Insurance Co.

International manager: Kleinwort Benson International.

George Hanks, assistant comptroller, oversees investments.

United Air Lines Inc.

	($ millions)
Total assets	3,170
Pension	3,134
Profit-sharing	0
Thrift or savings	36
Employer contributions	243
Benefit payments	150

CHICAGO — United Air Lines Inc. more than doubled its overseas equity holdings to $255.5 million as of Sept. 30, 1983, from $110 million reported in 1982. Between those months, the firm hired two Japanese-equity managers: Nikko International Capital Management and Yamaichi Asset Management. After Sept. 30, it added Baring International to its group of overseas managers, which also includes Lombard Odier and Morgan Grenfell Investment Services. There also were several domestic manager changes.

The fund's assets grew 26% to about $3.2 billion on Sept. 30, 1983, from $2.5 billion a year earlier. The asset mix is now 66% stocks, 22% bonds, 8% cash, and 4% real estate equity.

United manages $381.2 million in-house, with $247.8 in fixed-income and $133.4 in short-term investments. In passive investments, $118.7 million is indexed and $470.2 million is in GICs with John Hancock and CIGNA Corp.

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Equity managers: Sit Investment Associates; Capital Guardian; G.T. Capital Management; Batterymarch; CIGNA; Fayez Sarofim; Jennison Associates; Lincoln Capital Management; Pioneering Management; Stralem & Co.; TCW ; Thorndike, Doran, Paine & Lewis; Trinity Investment Management; and Wells Fargo Investment Advisors.

MacKay-Shields Financial Corp., Oppenheimer Capital, Starwood, and Wertheim were terminated by the fund.

Bond managers: Discount Corp. of New York Advisors and Harris Trust and Savings Bank.

Master trustee: Harris Trust and Savings Bank.

The airline has a 401(k) plan for employees.

Nancy A. Covington directly oversees the plan as pension assets administrator, and John L. Cowan is senior vice president-finance and John M. Batten is vice president and treasurer.

United Methodist Pension Fund

	($ millions)
Total assets	1,467
Pension	1,467
Profit-sharing	0
Thrift or savings	0
Employer contributions	176
Benefit payments	110

EVANSTON, Ill.— The United Methodist Church's pension fund increased 36% to about $1.5 billion from the $1.1 billion reported in 1982.

There were a number of investment management changes during the year. For equity, the fund added Cole, Yeager & Wood, Century Capital and INVESCO Capital Management. It dropped equity adviser Stein Roe & Farnham but retained it as a bond manager. North Carolina National Bank was dropped as a bond manager, while, CIGNA, in addition to its role as bond manager, was added for real estate.

Equity managers: American National Bank of Chicago; Capital Guardian; Century Capital; Chase Investment Counsel; Cole, Yeager & Wood; Delaware Investment Advisors; Frontier Capital Management; David J. Greene; INVESCO Capital Management; M.D. Sass; Mercantile Securities; and Putnam Advisory.

Bond managers: CIGNA Investment Management; Stein, Roe & Farnham; and American National Bank.

Real estate: JMB Institutional Realty and CIGNA Capital Advisers.

The approximate asset mix was 62.5% stocks, 23.1% bonds, 13.7% cash equivalents, and 0.7% real estate equity.

Key personnel are Gerald K. Hornung, general secretary; James F. Parker, treasurer; and Gayle Whitson-Schmidt, assistant general secretary.

United Mine Workers of America

	($ millions)
Total assets	2,523
Pension	2,523
Profit-sharing	0
Thrift or savings	0
Employer contributions	535
Benefit payments	400

WASHINGTON — The United Mine Workers Health and Retirement Funds increased by 31% to $2,523 million for the year ending Sept. 30, 1983, from $1,912 million in 1982.

In September, Herbert Dyer replaced the retiring Robert Boylan as executive director.

About $200 million in short-term cash equivalents was managed in-house as of Sept. 30, 1983.

The UMW 1974 Pension Trust added three new equity managers in 1983: Lehman Brothers; The Vanguard Group's Windsor Fund; and Bankers Trust Co. The fund also added three new real estate equity managers: Trust Co. of the West; State Street Research; and Goldman, Sachs & Co. The latter commitment, made in mid-1983, is less than $7 million investment in Goldman, Sachs' open-ended, commingled real estate trust fund.

Equity managers: Argus Investors' Counsel; Batterymarch Financial Management; Warburg, Pincus Counsellors; Pioneering Management; Torray Clark & Co.; Lehman Brothers; The Vanguard Group; Bankers Trust Co.; and Forstmann-Leff.

Bond managers: Fidelity Bank; Forstmann-Leff; Manufacturers' Hanover; Argus Fixed Income Advisory; Hoisington Investment Management; and Lehman Management Co.

Real estate managers: Equitable Life; John Hancock; Prudential; Metropolitan Life; Trust Co. of the West; State Street Research; Goldman, Sachs & Co.; Denver Investment Advisors; and Thompson, Siegel & Walmsley.

The approximate asset mix was 37% stocks, 36% bonds, 23% cash equivalents and 4% real estate equity.

Boston Safe Deposit & Trust is the custodian bank.

Herbert Dyer, executive director and Linda Taylor, chief investment officer are key investment personnel.

United Nations Joint Staff Pension Fund

	($ millions)
Total assets	3,394
Pension	3,394
Profit-sharing	0
Thrift or savings	0
Employer contributions	na
Benefit payments	na

NEW YORK — The United Nations Joint Staff Pension Fund increased 30% to about $3.4 billion, as of Sept. 30, 1983, from $2.6 billion in 1982.

All of the fund's assets are managed internally, with advice provided by Fiduciary Trust Co. of New York and Citicorp. About $1,316 million was in international investments, with $749 million in foreign equities, $529 million in fixed income, and the remainder in undisclosed investments.

Early in 1983, the fund placed an emphasis on U.S. investments by weighting U.S. stocks at 62% or $1.8 billion, and U.S. related bonds including U.S. dollar bonds, Treasuries, agencies and World Bank issues at 57% or $1.2 billion. As of Sept. 30, 1983, the fund held a 59% weighting or $1.2 billion in U.S. stocks, and a 56% weighting or roughly $675 million in U.S.-related bonds.

The fund holds 7% of total assets or $238 million, in 11 commingled, pooled real estate funds in the U.S., Europe, and Australia.

The approximate asset mix was 55% stocks, 35% bonds, 3% cash equivalents and 7% real estate equity.

The Fiduciary Trust Co. of New York is the master trustee.

Key investment personnel are: Timothy P. Prince, chief of investment management; E. Charles Stockmar, senior investment officer; and Henry Ouma, investment officer.

Send personnel news to Sally Duros, P&I Age, 740 N. Rush St. Chicago, 60611; (312) 649-5494.

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United Presbyterian Church Pension Board

	($ millions)
Total assets	892
Pension	892
Profit-sharing	0
Thrift or savings	0
Employer contributions	42
Benefit payments	38

PHILADELPHIA — The Board of Pensions of The Presbyterian Church (U.S.A.) ended 1983 by committing $25 million to a new real estate fund being formed by CIGNA Corp.

The pension fund will begin funding the investment this month out of an internally managed short-term account. The new closed-end fund is geared to non-profit, non-ERISA institutions, said William Irwin Arbuckle II, vice president and treasurer of the church fund. This marks the church's entry into equity real estate.

Earlier in 1983, the pension board hired two new bond managers: Robert C. Brown & Co. and CM&M Asset Management.

At the end of June, the church fund closed out a $67 million fixed-income account with the Fidelity Bank after its chief economist, Lacy Hunt, left and established CM&M.

Total pension assets increased 31.5%, to $892 million, for the year ending Sept. 30.

Equity managers: Fred Alger; Froley, Revy Investment; Morgan Guaranty Trust; Value Line Asset Management; and Wells Fargo Investment Advisors.

Bond managers: Robert C. Brown; CM&M Asset Management; and Morgan Guaranty Trust.

International manager: Templeton World Fund.

The church fund manages $18 million internally as part of its strategic allocation to fixed-income investments. The amount was entirely invested in short-term instruments maturing in one year or less.

The fund invests $95 million in two stock index funds and in the Templeton World Fund. It owns oil and gas leases.

As of Sept. 30, the approximate asset mix was 58.2% stocks, 16.1% bonds, 2% cash equivalents, 14.2% mortgages, and 9.5% GICs.

Chase Manhattan Bank serves as master custodian.

The church board has a 401(k) plan.

Mr. Arbuckle oversees investment of the fund.

United Technologies

	($ millions)
Total assets	4,200
Pension	3,570
Profit-sharing	0
Thrift or savings	630
Employer contributions	300
Benefit payments	na

HARTFORD, Conn. — United Technologies joined about seven other corporations in Trust Co. of the West's oil and gas commingled debt and overriding royalty fund in 1983.

In February, United Technologies hired seven additional money managers to handle a portion of employee benefit assets. They were BEA, Forstmann-Leff, and Lehman Management for equities; Narragansett First Fund for leveraged buy-outs; Morgan, Holland Fund and Charles River Partners for venture capital and Bridge Capital Advisors for participating debt partnerships.

United Technologies' employee benefit assets grew 27% to $4.2 billion as of Sept. 30, 1983, from $3.3 billion in 1982.

Roughly 85%, or $3.6 billion of the total was pension assets, and about 15% or $630 million was in a thrift/savings plan.

About $1.5 billion of the pension fund is in GICs and another $29 million is in dedicated bond funds.

The fund had $200 million invested in international equities as of Sept. 30, 1983.

International managers: Morgan Guaranty, Batterymarch Financial, Daiwa International, ABD International, Nomura Capital, and Capital Guardian.

Equity managers: NSR Asset Management, Jennison Associates, BEA Associates, Citibank, Connecticut Bank & Trust, CIGNA, Wertheim Asset Management, Capital Guardian Trust, Batterymarch Financial, Delaware Investment Advisors, Forstmann-Leff Associates, Lehman Management, Trust Co. of the West, Sanford C. Bernstein.

Bond managers: Brown Brothers, Harriman and Scudder Stevens & Clark.

Real estate managers: Citibank, Equitable Life, Prudential Insurance, Aetna Life & Casualty, and CIGNA.

The approximate asset mix was 36% stocks, 4% bonds, 6% cash equivalents, 5% real estate equity, and 49% other investments.

Citibank is the master trustee.

The personnel overseeing investment of the funds are Joseph A. Biernat, vice president and treasurer, and Raymond L. Willis, assistant treasurer.

Utah State Retirement Systems

	($ millions)
Total assets	1,665
Pension	1,665
Profit-sharing	0
Thrift or savings	0
Employer contributions	190
Benefit payments	45

SALT LAKE CITY — The Utah State Retirement Systems has increased assets by 21% in the past year to $1.7 billion from $1.4 billion.

Its asset mix is 31% stocks, 50% bonds, 12% cash equivalents, 6% real estate equity and 1% mortgages. The fund also uses options.

Equity managers: Smoot Knoche, Atalanta/Sosnoff, Value Line, Capital Consultants and Wasatch Advisors.

Real estate manager: F.I.A. Associates.

The fund also manages $1.2 billion internally.

Key investment personnel for the fund include W. Dan Smith, investment officer, and Richard L. Cherry, assistant investment officer.

U.S. Steel and Carnegie Pension Fund

	($ millions)
Total assets	7,310
Pension	7,310
Profit-sharing	0
Thrift or savings	0
Employer contributions	295
Benefit payments	700

NEW YORK — In 1983, the U.S. Steel & Carnegie Pension fund sold at a "substantial profit" the $335 million in U.S. Steel convertibles that was contributed to it in 1982.

However, the company gave $250 million of its $295 million 1983 contribution in a new series of convertible preferreds.

All of the fund's assets are managed internally, and while it uses international investments, real estate, venture capital and options, the amounts in each of these vehicles was not revealed. The fund has reportedly been weeding out lower

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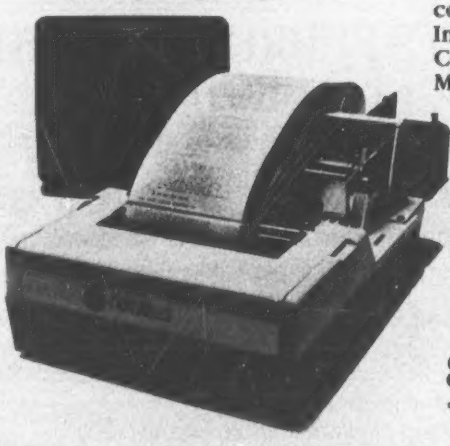

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quality buildings from its real estate equity portfolio.

The only asset mix figure revealed was 73% in common stocks.

During the year ended Sept. 30, the assets of the fund grew by 35%.

Graham O. Harrison, president, and John Van Deusen, vice president, oversee the fund.

V

Virginia Supplemental Retirement System

	($ millions)
Total assets	3,275
Pension	3,275
Profit-sharing	0
Thrift or savings	0
Employer contributions	340
Benefit payments	200

CHARLOTTESVILLE, Va. — The Virginia Supplemental Retirement System placed $300 million in an index fund managed by Wells Fargo Investment Advisors.

It also hired two new equity managers: IDS Advisory Group to run $150 million and MPT Associates to manage $100 million. In October, it committed $19 million to a real estate fund managed by LaSalle Advisors Inc. Bank of New York was dropped as an equity manager in June.

Other managers follow.

Equity managers: Batterymarch Financial Management, Delaware Investment Advisers, Lincoln Capital Management, MacKay-Shields Financial Management and Putnam Advisory.

Bond manager: Massachusetts Financial Services.

Real estate managers: Prudential, Equitable, RREEF.

As of Sept. 30, Virginia had 58% of its assets in equities, 30.5% in stocks, 3.4% in cash equivalents, 5.0% in real estate equity and 3.1% in mortgages.

Jonathan P. White is the chief investment officer.

W

Warner-Lambert Co.

	($ millions)
Total assets	710
Pension	608
Profit-sharing	0
Thrift or savings	102
Employer contributions	na
Benefit payments	na

MORRIS PLAINS, N.J. — Employee benefit assets at Warner-Lambert jumped to $710 million, a 41% increase from 1982's $502 million.

During the year, the funds began in-house equity management.

Equity managers: Fred Alger; Alliance Capital; Campbell Advisors; Chemical; Delaware Investment Advisers; Rowe Price-Fleming; Kemper Financial Services; Redwood Capital; L.F. Rothschild Asset Management; and in-house.

Bond managers: T. Rowe Price and Forstmann-Leff Associates.

Real estate manager: Irving Trust.

The approximate asset mix was 70% stocks, 14% bonds, 9% cash equivalents, 2% real estate equity and 5% GICs.

There is $30 million invested internationally in equity and the fund also uses venture capital.

Irving Trust is the master trustee for the pension plan; Fidelity Union Bank is the master trustee for the thrift or savings plan.

Key personnel are George Hromadko, vice chairman and chief financial officer; Fred G. Weiss, vice president-planning, development and investments; and Joseph K. Joshi, director-pension investments.

Washington State Investment Board

	($ millions)
Total assets	5,000
Pension	5,000
Profit-sharing	0
Thrift or savings	0
Employer contributions	400
Benefit payments	200

OLYMPIA, Wash. — The Washington State Investment Board's employee pension assets jumped to $5 billion as of Sept. 30, a 40% increase from 1982's $3.5 billion.

Equity managers United Capital and Schafer Capital were added at the beginning of 1983, while Loomis, Sayles & Co. was dropped.

During the year, the fund committed $60 million to three real estate equity pools. Each of the pools, which are run by Smith Barney, RREEF and Pacific Mutual, received $20 million.

Equity managers: Torray, Clark; Batterymarch; United Capital; Schafer Capital; Columbia Management; and Wells Fargo.

Bond manager: In-house.

Real estate managers: Smith, Barney; Prudential; Equitable; RREEF; and Pacific Mutual Realty.

The approximate asset mix was 45% stocks, 20% bonds, 10% cash equivalents, 1.5% real estate equity, 20% mortgages and 3.5% leveraged buy-out and venture capital.

A little more than $1 billion of the pension assets was indexed. The fund also uses venture capital.

Half of the $5 billion in pension assets, or $2.6 billion, is managed internally. Of that, equity accounted for $570 million, fixed income for $1.6 billion and short-term investments, $500 million.

Key personnel are John Hitchman, executive director, and Dave Lodefink, deputy executive director.

Westinghouse Electric

	($ millions)
Total assets	3,500
Pension	3,040
Profit-sharing	0
Thrift or savings	460
Employer contributions	156.5
Benefit payments	220

PITTSBURGH — Westinghouse Electric Corp.'s pension fund had $3.5 billion in assets as of Sept. 30. Those assets included $3.04 billion in pension assets and $460 million in thrift or savings plans assets.

Westinghouse manages $1.9 billion of these assets internally: $563 million in equity and $1.337 billion in fixed-income assets.

The asset mix of the pension assets was 37% stocks, 46% bonds, 3% cash equivalents, 12% real estate equity and 2% mortgages.

Equity managers: Citibank; Manufacturers Hanover; Putnam; Provident Capital Management; Stralem & Co.; Pittsburgh National; and Westinghouse Pension Investments Corp.

Bond managers: Westinghouse Pension Investments and Equitable Life.

Real estate managers: Equitable; Citibank; and First National Bank of Chicago.

The asset mix for the fund is 37% stocks, 46% bonds, 3% cash equivalents, 12% real estate equity and 2% mortgages.

Master trustee for the fund is Mellon Bank.

Key investment personnel include Thomas A. Gudiness, director-pension funds; Harry R. Murray, vice president-pension investment and investor relations; and Burt N. Dorsett, president-Westinghouse Pension Investment Corp.

Wisconsin Investment Board

	($ millions)
Total assets	7,900
Pension	7,900
Profit-sharing	0
Thrift or savings	0
Employer contributions	440
Benefit payments	200

MADISON, Wis. — The Wisconsin Investment Board increased its assets by almost 28% in the year ending Sept. 30, 1983, from $6.2 billion.

All of the assets are managed in-house, with $3.5 billion in equities, $3.6 billion in fixed-income and $700 million in short-term investments.

On Sept. 30, the fund had an asset mix of 45% stocks, 43% bonds, 9% cash equivalents and 3% mortgages.

Master trustee for the fund is Morgan Guaranty.

Kenneth E. Codlin is executive director of the fund.

World Bank Staff Retirement Plan

	($ millions)
Total assets	1,046
Pension	1,046
Profit-sharing	0
Thrift or savings	0
Employer contributions	95
Benefit payments	18

WASHINGTON — The World Bank invested $10 million in State Street Bank & Trust Co.'s SPIFF.

It also invested $5 million with Adler & Shaykin, a manager specializing in leveraged buy-outs.

The bank dropped Equitable Life Assurance as a real estate manager in late November.

During the year ending Sept. 30, it dropped Hoisington, a fixed-income manager, and Robeco, an international manager.

Equity managers: Gregg, McKay, Knight & McKay; Meridian Management; Quest Advisory; Wells Fargo Investment Advisors; Grantham, Mayo, Van Otterloo; Torray Clark.

Bond managers: AIM Capital; First Investors Asset Management; Fischer, Francis, Trees & Watts; Robert C. Brown; and MacKay-Shields Financial.

Real estate manager: Prudential.

International managers: Morgan Guaranty and State Street Bank & Trust.

Some of the managers listed were supplied by the Money Market Directory.

The more than $1 billion fund shot up roughly 49%, from the $700 million reported Sept. 30, 1982.

The fund has $300 million in index funds run by Wells Fargo and $245 million in an international fund run by State Street Bank.

The World Bank fund uses financial futures and has venture capital investments.

As of Sept. 30, its asset allocation was 76.1% stocks, 16.8% bonds, 1% cash equivalents, 4.7% real estate equities and 1.4% venture capital.

The master trustee is State Street Bank & Trust Co.

Overseeing the fund are Hilda Ochoa, chief-pension investment division; and Dennis Stattman and Farida Khambata, pension investment officers.

X

Xerox Corp.

	($ millions)
Total assets	1,650
Pension	230
Profit-sharing	1,420
Thrift or savings	0
Employer contributions	88
Benefit payments	148

STAMFORD, Conn. — Xerox Corp.'s total employee benefit assets increased by about 37% as of the year ending Sept. 30, to $1.6 billion from 1982's $1.2 billion.

About $230 million of the total is in the pension fund, and $1.4 billion in a profit-sharing plan.

In February 1983, Xerox was one of 10 corporate pension funds to invest in Trust Co. of the West's $10 million commingled oil and gas debt and overriding royalty fund.

Assets committed to international investment increased during the year, to $103 million from the $73 million reported in 1982. About 94% of that is in equities and 6% is in fixed income.

About $225 million is invested in GICs.

During the year, Xerox hired several managers: TCW Realty, for equity real estate; Brokaw Capital, First Pacific Investment Management and Hellman Jordan for equities; and Eberstadt and Salomon Asset Management for bonds.

Equity managers: Siebel Capital Management; Investors Research Corp.; Citibank; Batterymarch Financial; Rosenberg Capital Management; Trust Co. of the West; Schafer Capital; Management Asset Corp.; Brokaw Capital; First Pacific Investment; and Hellman Jordan.

Bond managers: Eberstadt Asset Management; Salomon Asset Management; Rosenberg Capital; and Trust Co. of the West.

International managers: Capital Guardian; Fidelity International; G.T. Capital Management; and Ivory & Sime.

Real estate managers: RREEF; TCW; and JMB Institutional Realty Corp.

During 1983, Xerox added a 401(k) plan to its roster of employee benefits.

The approximate asset mix as of Sept. 30 was 70% stocks, 10% bonds, 9% cash equivalents, 11% real estate equity.

State Street Bank is the master trustee.

Key investment personnel are Robert Evans, manager-employee benefits, and Myra Drucker, manager-trust investments.

A microcomputer guide for investment managers will be published in the Oct. 1 issue.

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GNMA is a government corporation chartered by Congress in 1938

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To be auctioned: 230 mortgages, total par value $706 million.
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This announcement does not constitute an offer to sell. The invitation to bid
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Pensions &
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Fund sells contribution

By Kimberly Blanton

CHICAGO — Martin Marietta Corp.'s pension fund has sold profitably the 500,000 shares of preferred stock it accepted as a company contribution more than a year ago.

Martin Marietta received $60.63 for each of the shares of convertible exchangeable preferred stock the company issued to the fund at $50 a share in December 1982.

On Jan. 11, Goldman Sachs & Co., the underwriter, offered the shares in a secondary public offering for $62.50 each.

Martin Marietta is the latest fund to sell employer's securities put there as a contribution. The cash-saving technique became widespread in 1983, but initially prompted much debate.

Some critics argued that in putting stock in the fund, a company often was making an investment decision usually reserved for the investment staff. The fear was that the fund sponsor's stock was not necessarily a good investment.

During the past year, the funds had mixed success reselling those securities.

Republic Steel Corp., American Motors Corp. and American Airlines Inc. report profitable sales of their employers' securities during 1983. Other companies, such as Armco Inc. and United States Steel Corp., still are holding some of their stock, waiting for an opportunity to sell.

Continued on page 53

Late news

White quits Virginia

RICHMOND, Va. — Jonathan P. White, chief investment officer for the $3.4 billion Virginia Supplemental Retirement System, has resigned.

Speaking from his home, Mr. White characterized his resignation after 2½ years as "unexpected," but would not comment further.

Charles Walker, chairman of the retirement system board, couldn't be reached for comment.

Robert Daniels, who has replaced Mr. White at the fund, also could not be reached.

One source said Mr. White and Mr. Walker had some differences of opinion.

That could not be confirmed as a reason for Mr. White's decision to resign.

Continued on page 2

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Tre

Leland O'Brien and Harris, Bretall

First Interstate buys two firms

By Steve Hemmerick

LOS ANGELES — First Interstate Investment Services is buying majority interests in Leland O'Brien Rubinstein Associates, a Los Angeles specialty money manager, and Harris, Bretall, McEldowney & Sullivan, a San Francisco-based equity manager.

If the multimillion-dollar deal receives regulatory approval, Western Asset Management, a subsidiary of First Interstate, will get out of the equity management business.

First Interstate intends to make Western Asset a bond manager; it now is a balanced manager. First Interstate also will spin off Western Asset's trust services department into a special group.

Jim Fox, First Interstate president who already has put together a string of investment subsidiaries, said he is giving the client sponsors what they want: investment firms that pay key personnel more than banks do, and that specialize in one area of investment.

No figures were given on the costs to First Interstate of the two new additions, but they were described as "substantial."

Leland O'Brien is considered a leader in its field, and it hedges or "insures" assets of $600 million.

> *If the deal is approved, Western Asset Management will get out of the equity management business.*

Harris Bretall has between $350 million and $400 million in tax-exempt assets, Mr. Fox said. Jack Sullivan, one of the partners, formerly was director of portfolio management for Western Asset.

Harris Bretall's equity assets under management are substantially smaller than the $700 million in equity assets held by Western Asset. But Western Asset executives note that Harris Bretall has superior equity performance.

Western Asset's equity performance has been middling in more recent years, while its fixed-income performance has been superior. On fixed income, Western Asset reports investment returns of 11.2% for the five years ended 1983, and 9.1% for 10 years.

This year, Western Asset will launch a fixed-income marketing drive; it is a finalist for a $300 million account with the Los Angeles County Employees Retirement Association.

An earlier equity marketing drive began when the company's performance in that area was high; the performance lessened during the drive itself. Its fixed-income performance also has been superior through consistency, rather than through market timing.

Western Asset now is talking to its clients about the prospect of integrating equity management with Harris Bretall. Some balanced accounts include Alameda County Employees' Retirement Association, Clorox Co. and Northern California Food Clerks.

Even before talking to clients, Western Asset dismissed seven members of its 14-member equity research staff, including its director of equity strategy, David Graham. Mr. Graham had been with Western Asset for 12 years.

A First Interstate executive said those dismissed "knew it was coming." He said much of the research the staff provided can be purchased.

Even though First Interstate

Continued on page 54

GE finances N.Y. realty deal

Pension fund lays groundwork for First Winthrop's $400 million purchase

By Mark Westerbeck

and Kimberly Blanton

NEW YORK — In a transaction mostly financed by the General Electric Co. pension fund, First Winthrop Corp. purchased about $400 million in mostly prime New York real estate from the MacArthur Foundation.

The deal, involving the sixth largest pension fund and what could turn out to be the second largest foundation, is a massive transfer of property by any standard.

The $12 billion General Electric fund provided a $330 million mortgage to First Winthrop to finance its purchase of real estate from the John D. and Catherine T. MacArthur Foundation.

In addition to handing $330 million cash to the Chicago foundation, First Winthrop also assumed $63 million in existing mortgages.

MacArthur reportedly will sell 15 buildings and the land under four others, about 4.5 million square feet of property. In sheer size, only the transactions involving the General Motors and Pan Am buildings in New York equal or exceed the cost of the MacArthur package.

Some of the office properties are among Manhattan's finest, including the Gulf & Western building on Columbus Circle and the Harcourt Brace Jovanovich Inc. building on Third Avenue. The HBJ building, in particular, could be profitable as new leases are negotiated when the publishing firm relocates to Florida.

Mary Lentz, spokeswoman for First Winthrop, said the deal is the Boston syndicator's largest onetime purchase of real estate.

First Winthrop deals primarily in private placements with individual investors and some small pension funds. It seeks debt financing from large institutional investors, in addition to putting up its own capital on behalf of clients.

The MacArthur Foundation is selling the properties to comply with a 1969 federal law that restricts philanthropies from owning more than 20% of one company's stock. The properties are owned by Bankers Life & Casualty Co., which is the foundation's sole asset. Some of its 50 subsidiaries hold real estate in California, Colorado and southern Florida as well as in New York.

In past interviews, David Murdoch, vice president-finance of the foundation, has said investment managers will be hired to invest the assets of the liquidated insurance company (*Pensions & Investment Age*, Sept. 14, 1981). Mr. Murdoch could not be reached, but Norton Kay, a spokesman, said no managers have been chosen yet.

The foundation "is in the process of divesting and there are going to be additional sales. I can't tell you how long that will take," Mr. Kay said. He declined to specify how much of the assets have been sold, but said it is not "the bulk."

Mr. Kay did admit that realizing the market value of the properties in the latest sale "substantially increases our asset value." Some of the real estate property was acquired as early as the 1930s, but has been revalued since then.

When the MacArthur Foundation sells all insurance company and real estate assets, some have predicted it will become the second largest foundation, behind the $3.5 billion Ford Foundation.

Continued on page 54

Boeing in futures holding pattern

By Steve Hemmerick

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SEATTLE — Boeing Co. is preparing to use financial futures to hedge the fixed-income portion of its $5.5 billion in employee benefits, said Gary Bland, manager of trust investments for Boeing.

But Mr. Bland said in an interview that problems have held up the use of futures to hedge fixed assets, which make up about 30% of Boeing's employee benefits.

Mr. Bland said he "takes offense" that brokers hold the maintenance margin requirements demanded by futures exchanges. Futures exchanges require a margin as collat-

Continued on page 51

SEC okays new funds

WESTPORT, Conn. — Evaluation Associates has received Securities and Exchange Commission approval of its Management of Managers funds that put it into the investment management business.

The new funds, to be managed by firms selected by Evaluation Associates, will be offered to bank trust departments, endowments, foundations, 501(c)(9) plans and profit-sharing plans in competition with the Frank Russell Trust Co. funds.

Evaluation Associates will offer eight funds: four equity funds, including a special equity fund, an income equity fund and an international equity fund; four fixed-income funds; and a money market fund.

The common equity fund will be managed by BEA Associates; Beutel, Goodman Capital Management; Cole, Yeager & Wood; Dillon Read Capital; Lynch & Mayer; and Rollert & Sullivan.

The special equity fund managers are Cambridge Capital Corp.; Gregg, McKay, Knight & McKay; GeoCapital Investment Management; Massachusetts Financial Services Co.; and Provident Investment Counsel.

The international equity fund will be managed by IDS Advisory-Gartmore International Inc. and Putnam International Advisors. The income equity fund will be managed by Delaware Investment Advisers and Hotchkis & Wiley.

The common fixed-income fund will be managed by Loomis, Sayles & Co.; Morgan Stanley Asset Management; and Robert C. Brown & Co. The intermediate fixed-income fund will be managed by Leavy Investment Management, Massachusetts Financial Services and T. Rowe Price Associates.

Other funds are a municipal bond fund and a short-term municipal bond fund.

Steve Gross, president of Evaluation Associates Investment Management Co., said one difference between the Management of Managers funds and those offered by the Russell Co. is that they would be available to taxable clients of bank trust departments as well as tax-exempt investors. However, the funds will be managed without regard to tax consequences.

Studying advisers helps university

By Steve Hemmerick

LOS ANGELES — The University of Southern California treasurer's staff hit the streets of New York, Chicago, Boston and other cities a short time ago, searching for aggressive equity managers.

Lyn Hutton, treasurer of the university, said she and two others interviewed 60 managers, not the usual 12 or fewer that many sponsors actually sit down and talk to after a consultant does much of the screening.

"I sat in most of the interviews myself," said Ms. Hutton, who oversees the college's $150 million endowment. After the selection, during which five managers were picked, she said she didn't think she could look at another investment manager for a while.

Although the search process was different from, and more grueling than, that of most sponsors, so were USC's objectives and needs.

USC has almost 30,000 students, and although Harvard University has many fewer students, the equity portion of its endowment is more than 10 times as large as USC's entire endowment. Even USC's neighbor, California Institute of Technology, with only about 2,000 students, has an endowment about $50 million larger.

USC alumni are "generous," Ms. Hutton said, but so far the school hasn't had the one or two gifts that make a big difference.

To endow professorships, buy books and provide research and scholarship funds, USC has a spending rule, which means spending 6½% of the endowment pool's market value size averaged over three years.

Just to keep even, minus new contributions, the university must get the 6½% on top of inflation — on a consistent basis.

In January, Harvard Management, which handles investments for that university's endowment, announced it had placed more than half of its $1.6 billion equity portfolio in three versions of an index fund based on the Standard & Poor's 500 index. Walter Cabot, president of Harvard Management, described the S&P 500 index as a "competitive bogey."

But because of USC's investment return needs, and because it is a much smaller endowment that can move more quickly, USC ruled out investment in an index fund.

Fayez Sarofim & Co., known for its expertise in oil stocks, had been USC's sole equity manager. But Ms. Hutton believed the university was running a big risk with a single manager, much like, she said, "owning one stock."

Ms. Hutton and her staff scanned data on 300 equity investment managers.

Most of the data was provided by Cambridge Associates, a consulting firm, and some data came from Merrill Lynch. But other than that, and asking for help from friendly sponsors nearby, the USC treasurer's staff did the work.

She said she and her staff did the work because they knew exactly what kind of manager they wanted, and they knew they would have to live with the results. Unlike a consultant, they couldn't walk away.

Also, Ms. Hutton said, she has built her own giant performance data base, classified for her uses,

Continued on page 53

Adviser questionnaires mailed

NEW YORK — The questionnaires for *Pensions & Investment Age's* annual Investment Adviser Directory, to be published April 30, have been mailed to more than 850 investment management organizations.

The deadline for return of the questionnaires, which will be used to prepare profiles of the nation's leading investment management organizations that manage assets for pension funds, endowments and foundations, is Feb. 20.

The issue serves as a starting point for many pension executives when they begin a search for new money managers. It also is a source for statistical data on the nation's leading money management organizations.

Money management firms that have not received a questionnaire by Feb. 10 should contact Eddy Christman at (212) 210-0117.

Late news

Continued from page 1

MILRITE picks CIGNA

HARRISBURG, Pa. — The Pennsylvania MILRITE Council has selected CIGNA, Hartford, Conn., to manage its private placement separate account, according to Gregg E. Robertson, the council's executive director.

MILRITE hopes to raise $100 million in pension assets to provide long-term loans to medium-sized state businesses.

So far, the Pennsylvania State Employees' Retirement System has conditionally committed up to $25 million or 25% to the fund, Mr. Robertson said.

Loomis, Sayles added

MEMPHIS, Tenn. — The City of Memphis Retirement Fund has started up a third options program with Loomis, Sayles & Co., Memphis, confirmed Jenny Graham, manager of debt and cash management with the system.

Loomis, Sayles will run an options overwriting program on $10 million invested in 10-year Treasury notes and 30-year Treasury bonds. Ms. Graham said Loomis is guaranteeing a minimum return of 200 basis points.

Loomis, Sayles also runs a buy-write program on equities and an overwrite equity program for the system.

Firm moves to bonds

BOSTON — Batterymarch Financial Management, which manages more than $10 billion in equities, is going into fixed-income management. It will apply its contrarian equity perspective to bond investments, according to Evan Schulman, senior vice president.

By the end of February, the firm hopes to have from $50 million to $70 million in new commitments.

"We are trying to capture information that is already here for equities," Mr. Schulman said. "If one can find abnormal stock returns, then the equity cushion underneath (that company's) bonds will be fatter."

Chemical spinoff

NEW YORK — Chemical Bank's trust and investment division has spun off The Portfolio Group Inc., an independent investment advisory firm.

The firm, with $1 billion under management as of Feb. 1, handles investments for individuals with portfolios of $300,000 or more and moderate-sized employee benefit accounts, according to Kenneth S. Rolland, its chief investment officer.

The spinoff marks the formation of the sixth independent money management subsidiary of Chemical New York Corp.

Wilshire forms sub

SANTA MONICA, Calif. — Wilshire Associates, the Los Angeles-based consulting firm, has formed Wilshire Asset Management to handle investment management activities, said Wayne Wagner, chief investment officer.

He said the new division was formed to avoid conflicts of interest with the consulting activities.

Wilshire Asset Management basically will offer indexed asset management using the Wilshire 5,000.

According to Mr. Wagner, the decision to enter investment management was made when the State of Minnesota hired Wilshire to set up an index fund last November and gave the firm $1.3 billion to manage.

Wilshire Asset Management will be marketed to pension funds and to banks by David Williams, vice president, who joined Wilshire from Bankers Trust. Mr. Wagner said Wilshire's index funds will use as many of the stocks in the Wilshire 5,000 as it can buy positions in.

3 hired for trust funds

HONOLULU — American Trust Co. has hired Kingsley, Jennison, McNulty & Morse Inc., San Francisco, and Denney & Denney Inc. and Cadinha & Co. Inc., both of Honolulu, to separately manage three common trust funds it will offer March 1.

The funds, one equity and two balanced funds targeted to pension plans of less than $1 million, will have different risk and investment characteristics.

D.C. bill crucial to S. Africa proposals

By Joel Chernoff

WASHINGTON — Congress' review of a bill requiring the District of Columbia Retirement Board to divest itself of securities issued by firms that do business in South Africa is seen as crucial to similar proposals pending in 26 states.

The House District of Columbia Committee will review the bill, possibly at its Feb. 7 meeting. A subcommittee has voted to send two motions of disapproval to the committee.

The subcommittee recommended that the committee reject the motions, sponsored by Rep. Philip M. Crane, R-Ill., and allow the bill to become law.

The bill is effective the end of the month unless Congress vetoes it by approving a motion of disapproval.

The bill, passed by the D.C. City Council in October, would force the $450 million retirement fund for police officers, firefighters, teachers and judges to divest itself of $141 million in stocks and bonds, or 32% of its total portfolio, according to latest estimates provided by Meidinger Asset Planning Services Inc., consultant to the fund.

That percentage is based on the fund's holdings as of Dec. 31, 1983, and is double the 16.2% estimate, or $75 million, that Meidinger had made for 12 months earlier.

The measure would bar the fund from investing in about half of the Standard & Poor's 500 stock index, Meidinger said. It also would affect all other city assets.

Congressional action on the D.C. bill is seen as crucial by opponents of divestiture of South Africa-related issues. They say that how Congress acts will be a sign for state and local legislative actions affecting public pension funds across the country. There are South Africa-related measures pending in 26 states.

So far, Massachusetts and some cities have passed bills requiring divestiture of state funds. Michigan has passed a bill affecting state university endowments and is considering a broader bill.

Connecticut has enacted a law allowing the state fund to invest in firms doing business in South

Continued on page 52

Highlights

CASH MANAGEMENT

Revenue boom a challenge 25
UAI lawsuit contested 25
Cash notes 25

CORPORATE FINANCE

Salomon Brothers lead underwriter 13
Mergers, acquisitions up 13
Corporate notes 13

DAN DORFMAN

Market is running on empty 46

FEATURES

Fachler: international waters 31
Levy: countering the consensus 32

DEPARTMENTS

Corrections 8
Current accounts 50
Editorials 10
Letters 10
Money movers 54
Washington 47

GENERAL NEWS

Medium-size funds dig into real estate 17
Bear, Stearns turns specialist 27

REAL ESTATE

Shopping centers best buys 19
FRC index: realty income steady 19
Morgan Guaranty fund is industry leader 21
Wrap-up 22

TREASURY MANAGEMENT

Treasurers seek way to fill gap 37
Boom year for micros 37
Microcomputers redefine the fundamentals ... 38
Directory of treasury software 40

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Corporate Finance

At the top in almost every category

Salomon Bros. lead underwriter in 1983

By Pavan Sahgal

NEW YORK — Salomon Brothers emerged as an all-around leader in total debt and equity underwritings in 1983, elbowing Merrill Lynch Capital Markets and Morgan Stanley & Co. from their 1982 positions.

Salomon also was a leading player in the initial public offering market, and the leading manager of shelf registered financings.

A Wall Street source said Salomon's underwriting of debt collateralized by mortgage obligations might have helped the investment bank hit the top of the underwriting charts.

Its participation in the conversion of savings and loan associations from mutual ownership to stock ownership structures also put it in the forefront of the initial public offering market, ahead of L.F. Rothschild, the source suggested.

In all, Salomon raised $31.5 billion in 298 financings when full credit was given to each manager and co-manager, according to Securities Data Co. Inc., a statistical research firm.

Salomon also led with $15.8 billion raised through 176 issues when full credit was given only to the lead manager.

The rankings were based on underwriting information registered with the Securities and Exchange Commission. Best efforts and debt-for-equity swap transactions were omitted.

Salomon outdistanced Merrill Lynch and Morgan Stanley, the respective leaders of the two categories in 1982.

Morgan, traditionally the leading book-running manager, fell to fifth place, raising $8.42 billion in 101 issues.

In another surprise, Drexel Burnham Lambert placed sixth with $7.35 billion raised in 125 issues — $1 billion short of Morgan's total. Drexel ranked eighth among lead managers in 1982, and was not among the top 10 in 1981.

U.S. corporations raised a record $97.3 billion through 2,197 securities underwritings in 1983, compared with $63 billion raised in 1,141 issues in 1982 and $56.24 billion raised through 1,266 financings in 1981.

In 1983, corporations raised $52.27 billion in bond offerings, $36.76 billion in common stock issues and $8.26 billion through preferred stock.

"The record year in corporate financing was led by common stock financing, which increased 163% from 1982," said Michael Danziger, senior vice president at Securities Data. "The number of all financings done during the year increased

Continued on page 14

Total underwritten corporate securities volume
January - December 1983
($ millions)

	1981	1982	1983
Bonds	40,575	44,058	52,276
Common	14,030	14,004	36,767
Preferred	1,643	4,931	8,259
Total	**56,247**	**62,992**	**97,302**
No./issues	(1,266)	(1,141)	(2,197)

Source: Securities Data Company, Inc.

Merger activity nudges '74 level

CHICAGO — Stronger cash flows and lower inflation boosted corporate mergers and acquisitions activity in 1983.

There were 2,533 merger and acquisition transactions last year, the highest number since 1974. That year, there were 2,861 deals, according to statistics compiled by W.T. Grimm & Co., merger consultants.

The largest number of transactions — 1,100 — were in manufacturing industries, followed by 461 deals in the financial services sector and 429 deals in other service industries.

The bull market in equities also fueled the increase, with sellers commanding higher prices and buyers using stock as a convenient form of payment.

For the first time in 10 years, stock superseded cash and became the dominant form of payment. Combination payments also outnumbered cash, forming a large proportion of transactions on record.

According to Grimm & Co., the total dollar value of all merger and acquisition transactions was $73.1 billion in 1983 vs. $53.8 billion in 1982. But the 1983 total fell $9.5 billion short of the record $82.6 billion in 1981.

"Flushed with cash, companies are raising dividends, repaying debt, increasing capital spending and activating strategic acquisition and divestiture programs," said Willard T. Grimm, chairman.

In 1983, 137 deals had price tags of $100 million or more, compared with 116 such deals in 1982.

Sellers benefited from the strong stock market, receiving attractive offers from buyers whose cash flows were boosted by the economic recovery, efficient cost controls, lower inflation and lower taxes.

The average price-earnings ratio paid for acquisitions increased to 16.7 in 1983 from 13.9 in 1982.

On the other hand, the strong stock market reduced the premium paid over market to 37.7% in 1983 from 47.4% in 1982.

There was a surge in total dollars paid in leveraged buy-outs where publicly traded companies were acquired by private investment groups or individuals.

According to Tomislava Simic, director of research at Grimm, the total dollar value paid for going-private deals leaped 154% to $7.1 billion in 1983 from $2.8 billion in 1982.

The number of transactions where companies were taken private also increased, to 36 in 1983 from 31 in 1982. In 1979, there were only 16 such deals, totaling $636 million.

A variety of forces are propelling leveraged buy-outs, Ms. Simic noted.

Among them is the willingness of banks to provide financing for these deals because traditional corporate credit demands have been restrained.

The three largest going-private transactions announced in 1983 were Metromedia Inc., the largest going-private deal in history, valued at $1.5 billion and taken over by its top executives; Wometco Enterprises Inc., valued at $810 million; and MGM/UA Entertainment Co., valued at $620.7 million.

Tender offers for publicly traded companies dropped 46%, to 37 deals in 1983; only 11 hostile deals were recorded. In 1982, there were 29 hostile takeovers out of the 68 offers recorded.

The drop in hostile takeovers suggested a scarcity of undervalued targets and the unwillingness of suitors to incur the expenses tied to takeover battles, Ms. Simic said.

A number of companies divested businesses acquired only a few years ago, in a bid to emphasize leaner operations and stronger balance sheets. The total dollar value paid for dives-

Continued on page 17

DLJ starts capital markets group

NEW YORK — Donaldson, Lufkin & Jenrette Inc. has realigned senior management and set up a new DLJ Capital Markets Group to capitalize on the firm's growth in serving corporate clients.

The new group will be headed by John S. Chalsty, chairman. Mr. Chalsty now is managing director of the banking division.

The change is expected to improve coordination among various DLJ divisions and support its growth in investment banking and institutional trading.

DLJ, a publicly owned investment banking and brokerage firm, has capital funds in excess of $300 million.

In a parallel move, it also set up a new DLJ Financial Services Group to generate increased activity with high-net-worth individual investors. The group will be headed by Carl B. Menges, managing director of the equities division, who has been named group chairman.

The presidents of the two new groups will be Theodore P. Shen, for Capital Markets, and Richard S. Pechter, for Financial Services.

DLJ Capital Markets Group will incorporate all investment banking, public finance, institutional equities and fixed-income activities, said Richard H. Jenrette, chairman of the parent company, and John K. Castle, president, in a joint announcement.

The DLJ Financial Services Group is to incorporate all activities of DLJ's regional office system and the Pershing Division, a leading provider of correspondent services to more than 300 regional brokerage firms and 100 banks.

The new groups will report directly to Mr. Castle.

The move does not affect Alliance Capital Management Corp., the pension fund management division of DLJ, and ACLI International Inc., the commodities subsidiary.

Corporate notes

Executive named

SAN FRANCISCO — Van Kasper & Co., a regional investment banking and brokerage firm, has named Bernard H. Goldsmith director of corporate finance.

Mr. Goldsmith formerly was chairman of the board of Barient Co., a manufacturer of winches and yacht gear.

"Barney Goldsmith brings over 40 years of top managerial experience to our firm," said F. Van Kasper, president. "Over that time he has developed a keen appreciation of the financing needs of emerging companies, the primary segment we serve."

Block trades increase

NEW YORK — An average of 1,436 block trades crossed the tape each day in 1983 — roughly four per minute — compared with the 1,007 per day recorded in 1982.

Large block trading volume measures institutional participation in the stock market.

A large block comprises 10,000 or more shares.

As a percentage of New York Stock Exchange reported volume, large block trading constituted 49.9% of all trading in December, compared with 49.3% in November.

Monthly block trading for 1983 averaged 45.6% of total NYSE reported volume, against 41% per month in 1982.

Cost put at $20.24

NEW YORK — The average overall cost per trade in the securities industry in 1983 was $20.24, but large securities firms tended to have lower overall operations costs per trade, according to a Peat Marwick Mitchell & Co. survey.

The bigger brokerage houses drew the greatest benefit from economies of scale, the accounting firm reported after a study of operations departments of 23 securities firms.

The benefits were apparent despite the 1983 bull market, which tended to equalize performance of brokerage firms, the survey found. The poll was conducted between Jan. 1 and June 30, 1983.

Total costs per trade include operations personnel costs, allocable portions of occupancy and equipment, communications and data processing costs, and floor brokerage and clearing costs.

Total operations department personnel costs per trade — which adds overtime, temporary employee and fringe benefit costs to the salary figures — were $5.89 per trade for large firms, $6.40 for medium firms and $7.18 for small firms.

"The magnitude of the large firm's salary productivity over the other firms was not as significant as it was during the previous year's bear market," said Pater E. Frank, Peat Marwick partner responsible for consulting services to the securities industry.

"In the 1982 survey, large firms' total salary costs per trade were 32% lower than small firms, and 5% lower than medium firms. The differential in salary costs per trade for the small and especially the medium firms compared to large firms was minimal, however, in 1983," he added.

Of the 23 firms participating in the confidential study, 14 were based in New York. Twenty-one firms said they had an institutional and retail clientele; two were solely retail.

Floor brokers of the large firms executed 195 trades per day on average, compared with 114 and 82 at medium and small firms respectively. Brokers at the large firms were paid the highest, but their higher trades-per-broker ratio made them the most cost effective at $2 in salary per New York Stock Exchange trade compared with $2.57 at medium firms and $3.15 at small firms.

However, bigger did not necessarily mean more revenue. Several small firms in the survey generated more revenue per trade than larger firms.

On a per-trade basis, total revenue averaged $131.88 for all firms. The firm with the highest revenue averaged $197.35 per trade and the one with the lowest revenue averaged $88.94 per trade.

Continued on page 17

Total 1983 volume
Full credit given to each manager and co-manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Salomon Brothers	31,450.9	298
2.	Merrill Lynch Capital Mkts.	28,818.5	330
3.	Goldman, Sachs	24,327.2	239
4.	First Boston	20,222.0	191
5.	Lehman Brothers Kuhn Loeb	11,765.8	132
6.	Morgan Stanley	11,222.3	124
7.	Drexel Burnham Lambert	9,418.8	150
8.	Kidder, Peabody	8,026.4	144
9.	E.F. Hutton	7,610.0	112
10.	Blyth Eastman Paine Webber	7,256.3	107
11.	Shearson/American Express	6,789.9	112
12.	Dean Witter Reynolds	6,131.2	120
13.	Prudential-Bache Securities	5,450.3	110
14.	A.G. Becker Paribas	4,457.2	69
15.	Bear, Stearns	4,011.3	64

Total 1983 volume
Credit given only to lead manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Salomon Brothers	15,759.9	176
2.	Merrill Lynch Capital Mkts.	11,043.7	181
3.	Goldman, Sachs	10,735.8	137
4.	First Boston	9,594.6	113
5.	Morgan Stanley	8,425.3	101
6.	Drexel Burnham Lambert	7,354.5	125
7.	Lehman Brothers Kuhn Loeb	5,704.8	74
8.	Kidder, Peabody	3,418.1	85
9.	Blyth Eastman Paine Webber	3,128.1	61
10.	E.F. Hutton	2,223.1	60
11.	Shearson/American Express	2,170.8	53
12.	L.F. Rothschild, Unterberg	2,106.8	64
13.	Prudential-Bache Securities	1,857.7	59
14.	A.G. Becker Paribas	1,567.6	34
15.	Smith Barney, Harris Upham	1,561.5	50

Straight debt 1983 volume
Full credit given to each manager and co-manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Salomon Brothers	21,401.9	192
2.	Merrill Lynch Capital Mkts.	15,298.7	142
3.	Goldman, Sachs	13,755.5	111
4.	First Boston	13,748.6	102
5.	Lehman Brothers Kuhn Loeb	6,965.2	51
6.	Drexel Burnham Lambert	5,592.0	65
7.	Morgan Stanley	5,224.2	42
8.	Kidder, Peabody	3,962.5	42
9.	Blyth Eastman Paine Webber	3,565.2	44
10.	Bear, Stearns	2,795.3	18
11.	Shearson/American Express	2,561.8	22
12.	Prudential-Bache Securities	2,503.8	36
13.	A.G. Becker	2,436.7	25
14.	E.F. Hutton	2,225.7	24
15.	Dean Witter Reynolds	1,963.1	26

Straight debt 1983 volume
Credit given only to lead manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Salomon Brothers	10,918.0	114
2.	First Boston	6,665.6	53
3.	Goldman, Sachs	4,929.7	47
4.	Merrill Lynch Capital Mkts.	4,746.5	58
5.	Drexel Burnham Lambert	4,716.9	53
6.	Lehman Brothers Kuhn Loeb	3,568.5	26
7.	Morgan Stanley	2,875.8	27
8.	Blyth Eastman Paine Webber	1,941.4	24
9.	A.G. Becker Paribas	1,195.0	13
10.	Kidder, Peabody	951.4	11
11.	Prudential-Bache Securities	572.4	13
12.	Smith Barney, Harris Upham	496.4	16
13.	Bear, Stearns	478.7	6
14.	E.F. Hutton	458.0	7
15.	Dillon, Read	308.9	4

Common stock 1983 volume
Full credit given to each manager and co-manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Merrill Lynch Capital Mkts.	9,188.8	139
2.	Goldman, Sachs	7,590.7	96
3.	Salomon Brothers	7,131.4	72
4.	Morgan Stanley	4,448.7	55
5.	E.F. Hutton	4,419.2	78
6.	First Boston	3,473.4	56
7.	Kidder, Peabody	3,354.9	87
8.	Dean Witter Reynolds	3,236.1	81
9.	Shearson/American Express	3,186.6	76
10.	Lehman Brothers Kuhn Loeb	3,116.1	58
11.	Prudential-Bache Securities	2,236.5	63
12.	L.F. Rothschild, Unterberg	2,203.0	66
13.	Blyth Eastman Paine Webber	2,064.1	47
14.	Alex. Brown & Sons	1,885.8	66
15.	Hambrecht & Quist	1,836.0	54

Common stock 1983 volume
Credit given only to lead manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Morgan Stanley	4,101.1	49
2.	Goldman, Sachs	3,995.1	71
3.	Merrill Lynch Capital Mkts.	3,875.1	93
4.	Salomon Brothers	3,394.3	43
5.	Kidder, Peabody	2,100.7	66
6.	L.F. Rothschild, Unterberg	1,886.3	58
7.	E.F. Hutton	1,505.3	49
8.	First Boston	1,391.5	37
9.	Shearson/American Express	1,341.5	44
10.	Lehman Brothers Kuhn Loeb	1,321.3	36
11.	Prudential-Bache Securities	1,080.3	42
12.	Blyth Eastman Paine Webber	936.7	33
13.	Drexel Burnham Lambert	932.2	43
14.	Smith Barney, Harris Upham	876.6	28
15.	Dean Witter Reynolds	755.7	41

Total 1983 initial public offering volume
Full credit given to each manager and co-manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Merrill Lynch Capital Mkts.	2,486.6	34
2.	Shearson/American Express	1,730.4	28
3.	E.F. Hutton	1,547.1	39
4.	L.F. Rothschild, Unterberg	1,344.3	37
5.	Salomon Brothers	1,195.2	18
6.	Goldman, Sachs	1,114.8	14
7.	Alex. Brown & Sons	1,095.6	41
8.	Dean Witter Reynolds	1,058.2	31
9.	Hambrecht & Quist	992.3	26
10.	Prudential-Bache Securities	965.0	36
11.	Drexel Burnham Lambert	757.0	20
12.	Morgan Stanley	666.0	13
13.	A.G. Becker Paribas	608.4	14
14.	Kidder, Peabody	580.4	18
15.	Blyth Eastman Paine Webber	563.2	13

Total 1983 initial public offering volume
Credit given only to lead manager
($ millions)

Rank	Firm	$ volume	No./issues
1.	Salomon Brothers	1,195.2	18
2.	L.F. Rothschild, Unterberg	1,100.1	30
3.	E.F. Hutton	839.4	26
4.	Merrill Lynch Capital Mkts.	781.4	23
5.	Prudential-Bache Securities	778.7	29
6.	Goldman, Sachs	654.5	12
7.	Shearson/American Express	638.7	11
8.	Morgan Stanley	610.0	12
9.	Kidder, Peabody	468.2	13
10.	Alex. Brown & Sons	408.8	19
11.	Drexel Burnham Lambert	370.9	15
12.	Lehman Brothers Kuhn Loeb	289.3	14
13.	Lazard Freres	237.8	2
14.	First Boston	222.1	6
15.	Bear, Stearns	217.6	10